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\\USER\MSK Leeds\SMS Only Sequences\Foot Sarcoma SMS\t2_tse_fs_long_axis_s2 *

TA: 58 sec Coil Selection: Auto Voxel Size: 0.6×0.6×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	20 %
Position	R34.9 A47.9 F27.6 mm
Orientation	T > C6.7 > S-1.9
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	270 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
TR	3000.0 ms
TE	73.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3000.0 ms
TE	73.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	270 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
Base Resolution	448
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	20 %
Position	R34.9 A47.9 F27.6 mm
Orientation	T > C6.7 > S-1.9
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	270 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
TR	3000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R34.9 A47.9 F27.6 mm
Orientation	T > C6.7 > S-1.9
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R34.9 A47.9 F27.6
R	34.9 mm
A	47.9 mm
F	27.6 mm
Initial Orientation	T > C
T > C	6.70
> S	-1.90
Initial Rotation	90.66 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	28 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R34.9 A47.9 F27.6 mm
Orientation	T > C6.7 > S-1.9
Rotation	90.66 deg
R >> L	135 mm
A >> P	270 mm
F >> H	93 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3000.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	270 mm
FoV Phase	50.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	207 Hz/Px
Echo Spacing	9.18 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	15
Echo Trains per Slice	8

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Foot Sarcoma SMS\t1_tse_short axis_240_p2_s2 *

TA: 1:11 min Coil Selection: Auto Voxel Size: 0.6×0.6×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	48
Distance Factor	10 %
Position	R34.6 A51.7 F12.3 mm
Orientation	C > T-18.1 > S4.5
Phase Encoding Dir.	F >> H
Phase Oversampling	100 %
FoV Read	140 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	500.0 ms
TE	10.00 ms
Averages	1
Concatenations	2
AutoAlign	---

Contrast - Common

TR	500.0 ms
TE	10.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	144 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	140 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	240
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	48
Distance Factor	10 %
Position	R34.6 A51.7 F12.3 mm
Orientation	C > T-18.1 > S4.5
Phase Encoding Dir.	F >> H
Phase Oversampling	100 %
FoV Read	140 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	500.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	2

Geometry - AutoAlign

Slice Group	1
Position	R34.6 A51.7 F12.3 mm
Orientation	C > T-18.1 > S4.5
Phase Encoding Dir.	F >> H
AutoAlign	---
Initial Position	R34.6 A51.7 F12.3
R	34.6 mm
A	51.7 mm
F	12.3 mm
Initial Orientation	C > T
C > T	-18.10
> S	4.50
Initial Rotation	90.09 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	12 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Foot/Ankle
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R34.6 A51.7 F12.3 mm
Orientation	C > T-18.1 > S4.5
Rotation	90.09 deg
F >> H	140 mm
R >> L	140 mm
A >> P	159 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	500.0 ms
Concatenations	2

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	140 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	2

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Fast
Gradient Mode	Normal
Flow Compensation	None
Bandwidth	181 Hz/Px
Echo Spacing	9.57 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	56

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Forearm SMS\t2_tse_stir_cor_256_S2 *

TA: 3:05 min Coil Selection: Auto Voxel Size: 0.7×0.7×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	10 %
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
Phase Oversampling	100 %
FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
TR	3540.0 ms
TE	34.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3540.0 ms
TE	34.00 ms
MTC	Off
Magn. Preparation	Slice-sel. IR
TI	160 ms
Freeze Suppr. Tissue	Off
Flip Angle	127 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
Base Resolution	256
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	10 %
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
Phase Oversampling	100 %
FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
TR	3540.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	L13.5 P67.3 F47.1
L	13.5 mm
P	67.3 mm
F	47.1 mm
Initial Orientation	C > T
C > T	-0.90
> S	0.10
Initial Rotation	-25.97 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	47 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off

System - Miscellaneous

MSMA	S - C - T
Sagittal	Med >> Lat
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Performance
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3540.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	Slice-sel. IR
TI	160 ms
Dark Blood	Off
FoV Read	180 mm
FoV Phase	187.5 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off

Inline - MIP

MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tir
Dimension	2D
RF Pulse Type	Fast
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	130 Hz/Px
Echo Spacing	11.4 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	7
Echo Trains per Slice	48

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Forearm SMS\t1_tse_cor_320_s2 *

TA: 54 sec Coil Selection: Auto Voxel Size: 0.9×0.9×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	10 %
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
Phase Oversampling	100 %
FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
TR	668.0 ms
TE	10.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	668.0 ms
TE	10.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	143 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
Base Resolution	192
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate

Resolution - Acceleration

Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	10 %
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
Phase Oversampling	100 %
FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
TR	668.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	L13.5 P67.3 F47.1
L	13.5 mm
P	67.3 mm
F	47.1 mm
Initial Orientation	C > T
C > T	-0.90
> S	0.10
Initial Rotation	-25.97 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	47 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T
Sagittal	Med >> Lat

System - Miscellaneous

Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Performance
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	668.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	180 mm
FoV Phase	187.5 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On

Inline - MIP

MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse_rr
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	Read
Bandwidth	171 Hz/Px
Echo Spacing	9.86 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	63

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle
Min Flip Angle	120 deg
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Forearm SMS\t2_tse_stir_ax 3mm_288_s2 *

TA: 2:07 min Coil Selection: Auto Voxel Size: 0.5×0.5×5.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	58
Distance Factor	10 %
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	160 mm
FoV Phase	112.5 %
Slice Thickness	5.0 mm
TR	3680.0 ms
TE	38.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3680.0 ms
TE	38.00 ms
MTC	Off
Magn. Preparation	Slice-sel. IR
TI	160 ms
Freeze Suppr. Tissue	Off
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	160 mm
FoV Phase	112.5 %
Slice Thickness	5.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	58
Distance Factor	10 %
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	160 mm
FoV Phase	112.5 %
Slice Thickness	5.0 mm
TR	3680.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	L8.0 P71.8 F47.8
L	8.0 mm
P	71.8 mm
F	47.8 mm
Initial Orientation	S > T
S > T	25.50
> C	-0.60
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	48 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off

System - Miscellaneous

MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3680.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	Slice-sel. IR
TI	160 ms
Dark Blood	Off
FoV Read	160 mm
FoV Phase	112.5 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off

Inline - MIP

MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tir
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	200 Hz/Px
Echo Spacing	9.48 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	6
Echo Trains per Slice	30

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Forearm SMS\t1_tse_tra_320_s2 *

TA: 2:30 min Coil Selection: Auto Voxel Size: 0.7×0.7×5.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	58
Distance Factor	10 %
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	180 mm
FoV Phase	131.3 %
Slice Thickness	5.0 mm
TR	535.0 ms
TE	10.00 ms
Averages	1
Concatenations	3
AutoAlign	---

Contrast - Common

TR	535.0 ms
TE	10.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	123 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	180 mm
FoV Phase	131.3 %
Slice Thickness	5.0 mm
Base Resolution	256
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	58
Distance Factor	10 %
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	180 mm
FoV Phase	131.3 %
Slice Thickness	5.0 mm
TR	535.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	3

Geometry - AutoAlign

Slice Group	1
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	L8.0 P71.8 F47.8
L	8.0 mm
P	71.8 mm
F	47.8 mm
Initial Orientation	S > T
S > T	25.50
> C	-0.60
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	48 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	535.0 ms
Concatenations	3

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	180 mm
FoV Phase	131.3 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	3

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse_rr
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	Read
Bandwidth	171 Hz/Px
Echo Spacing	10.1 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	83

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle
Min Flip Angle	120 deg
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Foot SMS\t1_tse_short axis_240_p2_s2 *

TA: 1:39 min Coil Selection: Auto Voxel Size: 0.6×0.6×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	46
Distance Factor	10 %
Position	L23.9 A86.8 F24.1 mm
Orientation	C > T-18.1 > S4.5
Phase Encoding Dir.	F >> H
Phase Oversampling	100 %
FoV Read	140 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	500.0 ms
TE	10.00 ms
Averages	1
Concatenations	3
AutoAlign	---

Contrast - Common

TR	500.0 ms
TE	10.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	140 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	240
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	46
Distance Factor	10 %
Position	L23.9 A86.8 F24.1 mm
Orientation	C > T-18.1 > S4.5
Phase Encoding Dir.	F >> H
Phase Oversampling	100 %
FoV Read	140 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	500.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	3

Geometry - AutoAlign

Slice Group	1
Position	L23.9 A86.8 F24.1 mm
Orientation	C > T-18.1 > S4.5
Phase Encoding Dir.	F >> H
AutoAlign	---
Initial Position	L23.9 A86.8 F24.1
L	23.9 mm
A	86.8 mm
F	24.1 mm
Initial Orientation	C > T
C > T	-18.10
> S	4.50
Initial Rotation	78.76 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

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

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Foot/Ankle
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L23.9 A86.8 F24.1 mm
Orientation	C > T-18.1 > S4.5
Rotation	78.76 deg
F >> H	140 mm
R >> L	140 mm
A >> P	152 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	500.0 ms
Concatenations	3

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	140 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	3

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Fast
Gradient Mode	Normal
Flow Compensation	None
Bandwidth	181 Hz/Px
Echo Spacing	9.57 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	56

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Wrist SMS\t2_tse_fs_tra_320_s2_2mm *

TA: 4:05 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	10 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	R >> L
Phase Oversampling	25 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
TE	84.00 ms
Averages	3
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3000.0 ms
TE	84.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	133 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	10 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	R >> L
Phase Oversampling	25 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	Transversal
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

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

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

System - Miscellaneous

Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	120 mm
A >> P	120 mm
F >> H	57 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3000.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	120 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off

Inline - MIP

MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	182 Hz/Px
Echo Spacing	12.0 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	11
Echo Trains per Slice	26

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	On
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	4500.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Wrist SMS\t1_tse_cor_320 (normal coronal)_s2_lowSARPulse *

TA: 1:49 min Coil Selection: Auto Voxel Size: 0.3×0.3×2.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	18
Distance Factor	20 %
Position	R3.6 A171.7 F44.7 mm
Orientation	C > S13.3 > T-1.2
Phase Encoding Dir.	R >> L
Phase Oversampling	30 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	519.0 ms
TE	12.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	519.0 ms
TE	12.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	18
Distance Factor	20 %
Position	R3.6 A171.7 F44.7 mm
Orientation	C > S13.3 > T-1.2
Phase Encoding Dir.	R >> L
Phase Oversampling	30 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	519.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R3.6 A171.7 F44.7 mm
Orientation	C > S13.3 > T-1.2
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R3.6 A171.7 F44.7
R	3.6 mm
A	171.7 mm
F	44.7 mm
Initial Orientation	C > S
C > S	13.30
> T	-1.20
Initial Rotation	0.53 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	45 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine

System - Miscellaneous

Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	519.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	100 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off

Inline - MIP

MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	191 Hz/Px
Echo Spacing	11.8 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	98

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Wrist SMS\t2_tse_fs_sag_208_s2 *

TA: 2:15 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.5 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	10 %
Position	R3.5 A169.4 F38.9 mm
Orientation	S > C-15.6 > T3.2
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	3500.0 ms
TE	60.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3500.0 ms
TE	60.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
Base Resolution	256
Phase Resolution	80 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	10 %
Position	R3.5 A169.4 F38.9 mm
Orientation	S > C-15.6 > T3.2
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	3500.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R3.5 A169.4 F38.9 mm
Orientation	S > C-15.6 > T3.2
Phase Encoding Dir.	H >> F
AutoAlign	---
Initial Position	R3.5 A169.4 F38.9
R	3.5 mm
A	169.4 mm
F	38.9 mm
Initial Orientation	S > C
S > C	-15.60
> T	3.20
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	39 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R3.5 A169.4 F38.9 mm
Orientation	S > C-15.6 > T3.2
Rotation	90.00 deg
F >> H	100 mm
A >> P	100 mm
R >> L	72 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3500.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	100 mm
FoV Phase	100.0 %
Phase Resolution	80 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	170 Hz/Px
Echo Spacing	12.0 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	35

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	On
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Wrist SMS\t1_tse_cor_320 (normal coronal)_s2_lowSARPulse *

TA: 1:49 min Coil Selection: Auto Voxel Size: 0.3×0.3×2.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	18
Distance Factor	20 %
Position	R11.6 A172.4 H30.4 mm
Orientation	C > T4.3 > S-3.8
Phase Encoding Dir.	R >> L
Phase Oversampling	30 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	519.0 ms
TE	12.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	519.0 ms
TE	12.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	18
Distance Factor	20 %
Position	R11.6 A172.4 H30.4 mm
Orientation	C > T4.3 > S-3.8
Phase Encoding Dir.	R >> L
Phase Oversampling	30 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	519.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R11.6 A172.4 H30.4 mm
Orientation	C > T4.3 > S-3.8
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R11.6 A172.4 H30.4
R	11.6 mm
A	172.4 mm
H	30.4 mm
Initial Orientation	C > T
C > T	4.30
> S	-3.80
Initial Rotation	0.10 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	30 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine

System - Miscellaneous

Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	519.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	100 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off

Inline - MIP

MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	191 Hz/Px
Echo Spacing	11.8 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	98

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Wrist SMS\t2_tse_fs_sag_208_s2 *

TA: 2:15 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.5 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	10 %
Position	R12.7 A172.4 H37.2 mm
Orientation	S > T-7.0 > C6.7
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	3500.0 ms
TE	60.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3500.0 ms
TE	60.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
Base Resolution	256
Phase Resolution	80 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	10 %
Position	R12.7 A172.4 H37.2 mm
Orientation	S > T-7.0 > C6.7
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	3500.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R12.7 A172.4 H37.2 mm
Orientation	S > T-7.0 > C6.7
Phase Encoding Dir.	H >> F
AutoAlign	---
Initial Position	R12.7 A172.4 H37.2
R	12.7 mm
A	172.4 mm
H	37.2 mm
Initial Orientation	S > T
S > T	-7.00
> C	6.70
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	37 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R12.7 A172.4 H37.2 mm
Orientation	S > T-7.0 > C6.7
Rotation	90.00 deg
F >> H	100 mm
A >> P	100 mm
R >> L	72 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3500.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	100 mm
FoV Phase	100.0 %
Phase Resolution	80 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	170 Hz/Px
Echo Spacing	12.0 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	35

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	On
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Wrist SMS\t2_tse_fs_tra_320_s2_2mm *

TA: 4:05 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	10 %
Position	R1.8 A170.0 F0.6 mm
Orientation	T > S6.9 > C-2.8
Phase Encoding Dir.	R >> L
Phase Oversampling	25 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
TE	84.00 ms
Averages	3
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3000.0 ms
TE	84.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	133 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	10 %
Position	R1.8 A170.0 F0.6 mm
Orientation	T > S6.9 > C-2.8
Phase Encoding Dir.	R >> L
Phase Oversampling	25 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R1.8 A170.0 F0.6 mm
Orientation	T > S6.9 > C-2.8
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R1.8 A170.0 F0.6
R	1.8 mm
A	170.0 mm
F	0.6 mm
Initial Orientation	T > S
T > S	6.90
> C	-2.80
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	1 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R1.8 A170.0 F0.6 mm
Orientation	T > S6.9 > C-2.8
Rotation	90.00 deg
R >> L	120 mm
A >> P	120 mm
F >> H	57 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3000.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	120 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	182 Hz/Px
Echo Spacing	12.0 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	11
Echo Trains per Slice	26

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	On
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	4500.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Wrist SMS\t1_tse_cor_320 (normal coronal)_s2_lowSARPulse *

TA: 1:49 min Coil Selection: Auto Voxel Size: 0.3×0.3×2.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	18
Distance Factor	20 %
Position	R3.6 A171.7 F44.7 mm
Orientation	C > S13.3 > T-1.2
Phase Encoding Dir.	R >> L
Phase Oversampling	30 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	519.0 ms
TE	12.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	519.0 ms
TE	12.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	18
Distance Factor	20 %
Position	R3.6 A171.7 F44.7 mm
Orientation	C > S13.3 > T-1.2
Phase Encoding Dir.	R >> L
Phase Oversampling	30 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	519.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R3.6 A171.7 F44.7 mm
Orientation	C > S13.3 > T-1.2
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R3.6 A171.7 F44.7
R	3.6 mm
A	171.7 mm
F	44.7 mm
Initial Orientation	C > S
C > S	13.30
> T	-1.20
Initial Rotation	0.53 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	45 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine

System - Miscellaneous

Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	519.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	100 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off

Inline - MIP

MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	191 Hz/Px
Echo Spacing	11.8 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	98

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Wrist SMS\t2_tse_fs_sag_208_s2 *

TA: 2:15 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.5 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	10 %
Position	R3.5 A169.4 F38.9 mm
Orientation	S > C-15.6 > T3.2
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	3500.0 ms
TE	60.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3500.0 ms
TE	60.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
Base Resolution	256
Phase Resolution	80 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	10 %
Position	R3.5 A169.4 F38.9 mm
Orientation	S > C-15.6 > T3.2
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	3500.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R3.5 A169.4 F38.9 mm
Orientation	S > C-15.6 > T3.2
Phase Encoding Dir.	H >> F
AutoAlign	---
Initial Position	R3.5 A169.4 F38.9
R	3.5 mm
A	169.4 mm
F	38.9 mm
Initial Orientation	S > C
S > C	-15.60
> T	3.20
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	39 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R3.5 A169.4 F38.9 mm
Orientation	S > C-15.6 > T3.2
Rotation	90.00 deg
F >> H	100 mm
A >> P	100 mm
R >> L	72 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3500.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	100 mm
FoV Phase	100.0 %
Phase Resolution	80 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	170 Hz/Px
Echo Spacing	12.0 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	35

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	On
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Wrist SMS\t1_tse_cor_320 (normal coronal)_s2_lowSARPulse *

TA: 1:49 min Coil Selection: Auto Voxel Size: 0.3×0.3×2.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	18
Distance Factor	20 %
Position	R11.6 A172.4 H30.4 mm
Orientation	C > T4.3 > S-3.8
Phase Encoding Dir.	R >> L
Phase Oversampling	30 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	519.0 ms
TE	12.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	519.0 ms
TE	12.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	18
Distance Factor	20 %
Position	R11.6 A172.4 H30.4 mm
Orientation	C > T4.3 > S-3.8
Phase Encoding Dir.	R >> L
Phase Oversampling	30 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	519.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R11.6 A172.4 H30.4 mm
Orientation	C > T4.3 > S-3.8
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R11.6 A172.4 H30.4
R	11.6 mm
A	172.4 mm
H	30.4 mm
Initial Orientation	C > T
C > T	4.30
> S	-3.80
Initial Rotation	0.10 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	30 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine

System - Miscellaneous

Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	519.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	100 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off

Inline - MIP

MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	191 Hz/Px
Echo Spacing	11.8 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	98

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Wrist SMS\t2_tse_fs_sag_208_s2 *

TA: 2:15 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.5 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	10 %
Position	R12.7 A172.4 H37.2 mm
Orientation	S > T-7.0 > C6.7
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	3500.0 ms
TE	60.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3500.0 ms
TE	60.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
Base Resolution	256
Phase Resolution	80 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	10 %
Position	R12.7 A172.4 H37.2 mm
Orientation	S > T-7.0 > C6.7
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	100 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	3500.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R12.7 A172.4 H37.2 mm
Orientation	S > T-7.0 > C6.7
Phase Encoding Dir.	H >> F
AutoAlign	---
Initial Position	R12.7 A172.4 H37.2
R	12.7 mm
A	172.4 mm
H	37.2 mm
Initial Orientation	S > T
S > T	-7.00
> C	6.70
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	37 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R12.7 A172.4 H37.2 mm
Orientation	S > T-7.0 > C6.7
Rotation	90.00 deg
F >> H	100 mm
A >> P	100 mm
R >> L	72 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3500.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	100 mm
FoV Phase	100.0 %
Phase Resolution	80 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	170 Hz/Px
Echo Spacing	12.0 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	35

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	On
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Wrist SMS\t2_tse_dixon_tra_320_s2_trial_2 *

TA: 4:30 min Coil Selection: Auto Voxel Size: 0.3×0.3×2.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	10 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	90 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3070.0 ms
TE	51.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3070.0 ms
TE	51.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Dixon
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	90 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off
Asymmetric Echo	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	10 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	90 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3070.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	Transversal
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

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

System - Miscellaneous

Coil Selection	ACS All but spine
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

System - Miscellaneous

Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	90 mm
R >> L	90 mm
F >> H	57 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3070.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Dixon
Magn. Preparation	None
Dark Blood	Off
FoV Read	90 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
RF Pulse Type	Fast
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	295 Hz/Px
Echo Spacing	12.87 ms
Asymmetric Echo	Off
Define	Turbo Factor
Turbo Factor	15
Echo Trains per Slice	21

Sequence - Part 2

Introduction	On
Phase Correction	Off
Red. EC Sensitivity	Off
Reduce Motion Sens.	Off

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Tib/Fib SMS\t1_tse_tra_320_s2 *

TA: 2:13 min Coil Selection: Auto Voxel Size: 0.6×0.6×7.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	48
Distance Factor	10 %
Position	L6.5 P100.3 F39.4 mm
Orientation	T > S-1.4 > C-0.5
Phase Encoding Dir.	A >> P
Phase Oversampling	100 %
FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	7.0 mm
TR	666.0 ms
TE	10.00 ms
Averages	1
Concatenations	2
AutoAlign	---

Contrast - Common

TR	666.0 ms
TE	10.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	143 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	7.0 mm
Base Resolution	256
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	48
Distance Factor	10 %
Position	L6.5 P100.3 F39.4 mm
Orientation	T > S-1.4 > C-0.5
Phase Encoding Dir.	A >> P
Phase Oversampling	100 %
FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	7.0 mm
TR	666.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	2

Geometry - AutoAlign

Slice Group	1
Position	L6.5 P100.3 F39.4 mm
Orientation	T > S-1.4 > C-0.5
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	L6.5 P100.3 F39.4
L	6.5 mm
P	100.3 mm
F	39.4 mm
Initial Orientation	T > S
T > S	-1.40
> C	-0.50
Initial Rotation	14.74 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	39 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	Med >> Lat
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	666.0 ms
Concatenations	2

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	160 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	2

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse_rr
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	Read
Bandwidth	171 Hz/Px
Echo Spacing	10.4 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	90

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle
Min Flip Angle	120 deg
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Thigh/Femur SMS\t1_tse_tra_320_s2 *

TA: 1:38 min Coil Selection: Auto Voxel Size: 0.9×0.9×7.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	48
Distance Factor	10 %
Position	L73.8 P15.0 H73.8 mm
Orientation	T > S-1.4 > C-0.5
Phase Encoding Dir.	A >> P
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	100.0 %
Slice Thickness	7.0 mm
TR	623.0 ms
TE	9.90 ms
Averages	1
Concatenations	2
AutoAlign	---

Contrast - Common

TR	623.0 ms
TE	9.90 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	143 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	220 mm
FoV Phase	100.0 %
Slice Thickness	7.0 mm
Base Resolution	256
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	48
Distance Factor	10 %
Position	L73.8 P15.0 H73.8 mm
Orientation	T > S-1.4 > C-0.5
Phase Encoding Dir.	A >> P
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	100.0 %
Slice Thickness	7.0 mm
TR	623.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	2

Geometry - AutoAlign

Slice Group	1
Position	L73.8 P15.0 H73.8 mm
Orientation	T > S-1.4 > C-0.5
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	L73.8 P15.0 H73.8
L	73.8 mm
P	15.0 mm
H	73.8 mm
Initial Orientation	T > S
T > S	-1.40
> C	-0.50
Initial Rotation	-0.59 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	74 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	Med >> Lat
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	623.0 ms
Concatenations	2

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	220 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	2

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse_rr
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	Read
Bandwidth	171 Hz/Px
Echo Spacing	9.92 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	68

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle
Min Flip Angle	120 deg
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Forearm Sarcoma SMS\t2_tse_stir_cor_256_S2 *

TA: 3:05 min Coil Selection: Auto Voxel Size: 0.7×0.7×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	10 %
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
Phase Oversampling	100 %
FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
TR	3540.0 ms
TE	34.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3540.0 ms
TE	34.00 ms
MTC	Off
Magn. Preparation	Slice-sel. IR
TI	160 ms
Freeze Suppr. Tissue	Off
Flip Angle	127 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
Base Resolution	256
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	10 %
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
Phase Oversampling	100 %
FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
TR	3540.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	L13.5 P67.3 F47.1
L	13.5 mm
P	67.3 mm
F	47.1 mm
Initial Orientation	C > T
C > T	-0.90
> S	0.10
Initial Rotation	-25.97 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	47 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
Store Coil Selection	Off

System - Miscellaneous

MSMA	S - C - T
Sagittal	Med >> Lat
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Performance
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3540.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	Slice-sel. IR
TI	160 ms
Dark Blood	Off
FoV Read	180 mm
FoV Phase	187.5 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off

Inline - MIP

MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tir
Dimension	2D
RF Pulse Type	Fast
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	130 Hz/Px
Echo Spacing	11.4 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	7
Echo Trains per Slice	48

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Forearm Sarcoma SMS\t1_tse_cor_320_s2 *

TA: 54 sec Coil Selection: Auto Voxel Size: 0.9×0.9×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	26
Distance Factor	10 %
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
Phase Oversampling	100 %
FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
TR	668.0 ms
TE	10.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	668.0 ms
TE	10.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	143 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
Base Resolution	192
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate

Resolution - Acceleration

Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	26
Distance Factor	10 %
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
Phase Oversampling	100 %
FoV Read	180 mm
FoV Phase	187.5 %
Slice Thickness	3.0 mm
TR	668.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	L13.5 P67.3 F47.1 mm
Orientation	C > T-0.9 > S0.1
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	L13.5 P67.3 F47.1
L	13.5 mm
P	67.3 mm
F	47.1 mm
Initial Orientation	C > T
C > T	-0.90
> S	0.10
Initial Rotation	-25.97 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	47 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
Store Coil Selection	Off
MSMA	S - C - T
Sagittal	Med >> Lat

System - Miscellaneous

Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Performance
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	668.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	180 mm
FoV Phase	187.5 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On

Inline - MIP

MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse_rr
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	Read
Bandwidth	171 Hz/Px
Echo Spacing	9.86 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	63

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle
Min Flip Angle	120 deg
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Forearm Sarcoma SMS\t2_tse_stir_ax 3mm_288_s2 *

TA: 2:07 min Coil Selection: Auto Voxel Size: 0.5×0.5×5.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	58
Distance Factor	10 %
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	160 mm
FoV Phase	112.5 %
Slice Thickness	5.0 mm
TR	3680.0 ms
TE	38.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3680.0 ms
TE	38.00 ms
MTC	Off
Magn. Preparation	Slice-sel. IR
TI	160 ms
Freeze Suppr. Tissue	Off
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	160 mm
FoV Phase	112.5 %
Slice Thickness	5.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	58
Distance Factor	10 %
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	160 mm
FoV Phase	112.5 %
Slice Thickness	5.0 mm
TR	3680.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	L8.0 P71.8 F47.8
L	8.0 mm
P	71.8 mm
F	47.8 mm
Initial Orientation	S > T
S > T	25.50
> C	-0.60
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	48 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
Store Coil Selection	Off

System - Miscellaneous

MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3680.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	Slice-sel. IR
TI	160 ms
Dark Blood	Off
FoV Read	160 mm
FoV Phase	112.5 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off

Inline - MIP

MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tir
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	200 Hz/Px
Echo Spacing	9.48 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	6
Echo Trains per Slice	30

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Forearm Sarcoma SMS\t1_tse_tra_320_s2 *

TA: 2:30 min Coil Selection: Auto Voxel Size: 0.7×0.7×5.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	58
Distance Factor	10 %
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	180 mm
FoV Phase	131.3 %
Slice Thickness	5.0 mm
TR	535.0 ms
TE	10.00 ms
Averages	1
Concatenations	3
AutoAlign	---

Contrast - Common

TR	535.0 ms
TE	10.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	123 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

Resolution - Common

FoV Read	180 mm
FoV Phase	131.3 %
Slice Thickness	5.0 mm
Base Resolution	256
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	58
Distance Factor	10 %
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	180 mm
FoV Phase	131.3 %
Slice Thickness	5.0 mm
TR	535.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	3

Geometry - AutoAlign

Slice Group	1
Position	L8.0 P71.8 F47.8 mm
Orientation	S > T25.5 > C-0.6
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	L8.0 P71.8 F47.8
L	8.0 mm
P	71.8 mm
F	47.8 mm
Initial Orientation	S > T
S > T	25.50
> C	-0.60
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	48 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	535.0 ms
Concatenations	3

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	180 mm
FoV Phase	131.3 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	3

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse_rr
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	Read
Bandwidth	171 Hz/Px
Echo Spacing	10.1 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	83

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle
Min Flip Angle	120 deg
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Knee SMS\pd_tse_fs_tra_SMS_384 *

TA: 2:43 min Coil Selection: Auto Voxel Size: 0.4×0.4×3.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	36
Distance Factor	10 %
Position	L51.3 A17.3 F24.5 mm
Orientation	Transversal
Phase Encoding Dir.	R >> L
Phase Oversampling	30 %
FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	3000.0 ms
TE	12.00 ms
Averages	1
Concatenations	1
AutoAlign	Knee > Standard

Contrast - Common

TR	3000.0 ms
TE	12.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
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	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	36
Distance Factor	10 %
Position	L51.3 A17.3 F24.5 mm
Orientation	Transversal
Phase Encoding Dir.	R >> L
Phase Oversampling	30 %
FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	3000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	L51.3 A17.3 F24.5 mm
Orientation	Transversal
Phase Encoding Dir.	R >> L
AutoAlign	Knee > Standard
Initial Position	L51.3 A17.3 F24.5
L	51.3 mm
A	17.3 mm
F	24.5 mm
Initial Orientation	Transversal
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	25 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS Restricted
Store Coil Selection	Off
MSMA	S - C - T
Sagittal	Med >> Lat
Coronal	A >> P

System - Miscellaneous

Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L51.3 A17.3 F24.5 mm
Orientation	Transversal
Rotation	90.00 deg
R >> L	160 mm
A >> P	160 mm
F >> H	119 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3000.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	160 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off

Inline - MIP

MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	181 Hz/Px
Echo Spacing	11.6 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	7
Echo Trains per Slice	50

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	4500.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Knee SMS\t2_tse_fs_sag_320_SMS_2av *

TA: 2:49 min Coil Selection: Auto Voxel Size: 0.4×0.4×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	30
Distance Factor	10 %
Position	L18.3 A3.6 F10.5 mm
Orientation	S > C11.1
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	3540.0 ms
TE	72.00 ms
Averages	2
Concatenations	1
AutoAlign	Knee > Standard

Contrast - Common

TR	3540.0 ms
TE	72.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	180 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	368
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	30
Distance Factor	10 %
Position	L18.3 A3.6 F10.5 mm
Orientation	S > C11.1
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	3540.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	L18.3 A3.6 F10.5 mm
Orientation	S > C11.1
Phase Encoding Dir.	H >> F
AutoAlign	Knee > Standard
Initial Position	L18.3 A3.6 F10.5
L	18.3 mm
A	3.6 mm
F	10.5 mm
Initial Orientation	S > C
S > C	11.10
> T	0.00
Initial Rotation	90.66 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	10 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS Restricted
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	Med >> Lat
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L18.3 A3.6 F10.5 mm
Orientation	S > C11.1
Rotation	90.66 deg
F >> H	160 mm
A >> P	160 mm
R >> L	99 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3540.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	160 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	120 Hz/Px
Echo Spacing	14.3 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	22

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Knee SMS\pd_tse_fs_cor SMS_320 *

TA: 2:11 min Coil Selection: Auto Voxel Size: 0.5×0.5×3.0 mm³ Acc:: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	28
Distance Factor	10 %
Position	L53.1 A31.6 F16.4 mm
Orientation	C > S13.3
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	2500.0 ms
TE	25.00 ms
Averages	1
Concatenations	1
AutoAlign	Knee > Standard

Contrast - Common

TR	2500.0 ms
TE	25.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	180 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
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 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	1
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	2
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	28
Distance Factor	10 %
Position	L53.1 A31.6 F16.4 mm
Orientation	C > S13.3
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	2500.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	L53.1 A31.6 F16.4 mm
Orientation	C > S13.3
Phase Encoding Dir.	R >> L
AutoAlign	Knee > Standard
Initial Position	L53.1 A31.6 F16.4
L	53.1 mm
A	31.6 mm
F	16.4 mm
Initial Orientation	C > S
C > S	13.30
> T	0.00
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	16 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS Restricted
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	Med >> Lat
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L53.1 A31.6 F16.4 mm
Orientation	C > S13.3
Rotation	0.00 deg
R >> L	160 mm
F >> H	160 mm
A >> P	93 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	2500.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	160 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	150 Hz/Px
Echo Spacing	12.4 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	7
Echo Trains per Slice	48

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Knee SMS\t2_tse_fs_sag_320_SMS *

TA: 4:07 min Coil Selection: Auto Voxel Size: 0.4×0.4×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	30
Distance Factor	10 %
Position	L74.0 P2.0 F16.0 mm
Orientation	S > C25.8 > T-3.5
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	3540.0 ms
TE	72.00 ms
Averages	3
Concatenations	1
AutoAlign	Knee > Standard

Contrast - Common

TR	3540.0 ms
TE	72.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	180 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	Restore
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	368
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	30
Distance Factor	10 %
Position	L74.0 P2.0 F16.0 mm
Orientation	S > C25.8 > T-3.5
Phase Encoding Dir.	H >> F
Phase Oversampling	100 %
FoV Read	160 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	3540.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	L74.0 P2.0 F16.0 mm
Orientation	S > C25.8 > T-3.5
Phase Encoding Dir.	H >> F
AutoAlign	Knee > Standard
Initial Position	L1.0 P3.0 F20.0
L	1.0 mm
P	3.0 mm
F	20.0 mm
Initial Orientation	S > C
S > C	11.10
> T	0.00
Initial Rotation	90.66 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	16 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS Restricted
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	Med >> Lat
Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L74.0 P2.0 F16.0 mm
Orientation	S > C25.8 > T-3.5
Rotation	91.38 deg
F >> H	160 mm
A >> P	160 mm
R >> L	99 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3540.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	160 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tseR
Dimension	2D
RF Pulse Type	Low SAR
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	120 Hz/Px
Echo Spacing	14.3 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	22

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	120 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand SMS\t1_tse_cor_624_2mm_s2 *

TA: 1:45 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
TE	9.50 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	600.0 ms
TE	9.50 ms
MTC	Off
Magn. Preparation	None
Flip Angle	140 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
Base Resolution	624
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate

Resolution - Acceleration

Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R4.0 A175.2 H11.3
R	4.0 mm
A	175.2 mm
H	11.3 mm
Initial Orientation	C > T
C > T	4.40
> S	3.10
Initial Rotation	0.34 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L

System - Miscellaneous

Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	600.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	220 mm
FoV Phase	75.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On

Inline - MIP

MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Fast
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	195 Hz/Px
Echo Spacing	9.47 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	82

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand SMS\t1_tse_tra_448_s2 *

TA: 2:55 min Coil Selection: Auto Voxel Size: 0.4×0.4×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	50 %
FoV Read	160 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
TR	860.0 ms
TE	10.00 ms
Averages	2
Concatenations	3
AutoAlign	---

Contrast - Common

TR	860.0 ms
TE	10.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	160 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
Base Resolution	448
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	50 %
FoV Read	160 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
TR	860.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	3

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	860.0 ms
Concatenations	3

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	160 mm
FoV Phase	50.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	3

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	199 Hz/Px
Echo Spacing	10.1 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	30

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand SMS\t2_tse_fs_tra_p2_s2_336 *

TA: 1:57 min Coil Selection: Auto Voxel Size: 0.5×0.5×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	160 mm
FoV Phase	50.6 %
Slice Thickness	3.0 mm
TR	6460.0 ms
TE	58.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	6460.0 ms
TE	58.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	160 mm
FoV Phase	50.6 %
Slice Thickness	3.0 mm
Base Resolution	336
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	160 mm
FoV Phase	50.6 %
Slice Thickness	3.0 mm
TR	6460.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Rotation	0.00 deg
A >> P	81 mm
R >> L	160 mm
F >> H	271 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	6460.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	160 mm
FoV Phase	50.6 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	198 Hz/Px
Echo Spacing	9.60 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	7

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand SMS\test_t1_tse_cor_624_2mm_s2 *

TA: 1:45 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
TE	9.50 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	600.0 ms
TE	9.50 ms
MTC	Off
Magn. Preparation	None
Flip Angle	140 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
Base Resolution	624
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate

Resolution - Acceleration

Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R4.0 A175.2 H11.3
R	4.0 mm
A	175.2 mm
H	11.3 mm
Initial Orientation	C > T
C > T	4.40
> S	3.10
Initial Rotation	0.34 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L

System - Miscellaneous

Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	600.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	220 mm
FoV Phase	75.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On

Inline - MIP

MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Fast
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	195 Hz/Px
Echo Spacing	9.47 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	82

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand SMS\t1_tse_tra_448_s2 *

TA: 2:58 min Coil Selection: Auto Voxel Size: 0.4×0.4×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	840.0 ms
TE	10.00 ms
Averages	2
Concatenations	3
AutoAlign	---

Contrast - Common

TR	840.0 ms
TE	10.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	840.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	3

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	840.0 ms
Concatenations	3

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	120 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	3

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	200 Hz/Px
Echo Spacing	10.2 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	31

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand SMS\t2_tse_fs_tra_p2_s2_336 *

TA: 2:12 min Coil Selection: Auto Voxel Size: 0.5×0.5×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	6460.0 ms
TE	68.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	6460.0 ms
TE	68.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	240
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	6460.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Rotation	90.00 deg
R >> L	120 mm
A >> P	120 mm
F >> H	271 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	6460.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	120 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	198 Hz/Px
Echo Spacing	9.70 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	8

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand Sarcoma SMS\t1_tse_cor_624_2mm_s2 *

TA: 1:45 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
TE	9.50 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	600.0 ms
TE	9.50 ms
MTC	Off
Magn. Preparation	None
Flip Angle	140 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
Base Resolution	624
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate

Resolution - Acceleration

Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R4.0 A175.2 H11.3
R	4.0 mm
A	175.2 mm
H	11.3 mm
Initial Orientation	C > T
C > T	4.40
> S	3.10
Initial Rotation	0.34 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L

System - Miscellaneous

Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	600.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	220 mm
FoV Phase	75.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On

Inline - MIP

MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Fast
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	195 Hz/Px
Echo Spacing	9.47 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	82

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand Sarcoma SMS\t1_tse_tra_448_s2 *

TA: 2:55 min Coil Selection: Auto Voxel Size: 0.4×0.4×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	50 %
FoV Read	160 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
TR	860.0 ms
TE	10.00 ms
Averages	2
Concatenations	3
AutoAlign	---

Contrast - Common

TR	860.0 ms
TE	10.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	160 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
Base Resolution	448
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	50 %
FoV Read	160 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
TR	860.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	3

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	860.0 ms
Concatenations	3

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	160 mm
FoV Phase	50.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	3

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	199 Hz/Px
Echo Spacing	10.1 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	30

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand Sarcoma SMS\t2_tse_fs_tra_p2_s2_336 *

TA: 1:57 min Coil Selection: Auto Voxel Size: 0.5×0.5×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	160 mm
FoV Phase	50.6 %
Slice Thickness	3.0 mm
TR	6460.0 ms
TE	58.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	6460.0 ms
TE	58.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	160 mm
FoV Phase	50.6 %
Slice Thickness	3.0 mm
Base Resolution	336
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	160 mm
FoV Phase	50.6 %
Slice Thickness	3.0 mm
TR	6460.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Rotation	0.00 deg
A >> P	81 mm
R >> L	160 mm
F >> H	271 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	6460.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	160 mm
FoV Phase	50.6 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	198 Hz/Px
Echo Spacing	9.60 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	7

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand Sarcoma SMS\test_t1_tse_cor_624_2mm_s2 *

TA: 1:45 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
TE	9.50 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	600.0 ms
TE	9.50 ms
MTC	Off
Magn. Preparation	None
Flip Angle	140 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
Base Resolution	624
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate

Resolution - Acceleration

Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R4.0 A175.2 H11.3
R	4.0 mm
A	175.2 mm
H	11.3 mm
Initial Orientation	C > T
C > T	4.40
> S	3.10
Initial Rotation	0.34 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L

System - Miscellaneous

Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	600.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	220 mm
FoV Phase	75.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On

Inline - MIP

MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Fast
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	195 Hz/Px
Echo Spacing	9.47 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	82

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand Sarcoma SMS\t1_tse_tra_448_s2 *

TA: 2:58 min Coil Selection: Auto Voxel Size: 0.4×0.4×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	840.0 ms
TE	10.00 ms
Averages	2
Concatenations	3
AutoAlign	---

Contrast - Common

TR	840.0 ms
TE	10.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	840.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	3

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	840.0 ms
Concatenations	3

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	120 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	3

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	200 Hz/Px
Echo Spacing	10.2 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	31

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\Hand Sarcoma SMS\t2_tse_fs_tra_p2_s2_336 *

TA: 2:12 min Coil Selection: Auto Voxel Size: 0.5×0.5×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	6460.0 ms
TE	68.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	6460.0 ms
TE	68.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	240
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	6460.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Rotation	90.00 deg
R >> L	120 mm
A >> P	120 mm
F >> H	271 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	6460.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	120 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	198 Hz/Px
Echo Spacing	9.70 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	8

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\MSK Hand SMS\t1_tse_cor_624_2mm_s2 *

TA: 1:45 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
TE	9.50 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	600.0 ms
TE	9.50 ms
MTC	Off
Magn. Preparation	None
Flip Angle	140 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
Base Resolution	624
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate

Resolution - Acceleration

Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R4.0 A175.2 H11.3
R	4.0 mm
A	175.2 mm
H	11.3 mm
Initial Orientation	C > T
C > T	4.40
> S	3.10
Initial Rotation	0.34 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L

System - Miscellaneous

Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	600.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	220 mm
FoV Phase	75.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On

Inline - MIP

MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Fast
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	195 Hz/Px
Echo Spacing	9.47 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	82

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\MSK Hand SMS\t1_tse_tra_448_s2 *

TA: 2:55 min Coil Selection: Auto Voxel Size: 0.4×0.4×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	50 %
FoV Read	160 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
TR	860.0 ms
TE	10.00 ms
Averages	2
Concatenations	3
AutoAlign	---

Contrast - Common

TR	860.0 ms
TE	10.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	160 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
Base Resolution	448
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	50 %
FoV Read	160 mm
FoV Phase	50.0 %
Slice Thickness	3.0 mm
TR	860.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	3

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	860.0 ms
Concatenations	3

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	160 mm
FoV Phase	50.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	3

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	199 Hz/Px
Echo Spacing	10.1 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	30

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\MSK Hand SMS\t2_tse_fs_tra_p2_s2_336 *

TA: 1:57 min Coil Selection: Auto Voxel Size: 0.5×0.5×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	160 mm
FoV Phase	50.6 %
Slice Thickness	3.0 mm
TR	6460.0 ms
TE	58.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	6460.0 ms
TE	58.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	160 mm
FoV Phase	50.6 %
Slice Thickness	3.0 mm
Base Resolution	336
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
Phase Oversampling	40 %
FoV Read	160 mm
FoV Phase	50.6 %
Slice Thickness	3.0 mm
TR	6460.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Rotation	0.00 deg
A >> P	81 mm
R >> L	160 mm
F >> H	271 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	6460.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	160 mm
FoV Phase	50.6 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	198 Hz/Px
Echo Spacing	9.60 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	7

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	6000.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\MSK Hand SMS\t1_tse_cor_624_2mm_s2 *

TA: 1:45 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
TE	9.50 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	600.0 ms
TE	9.50 ms
MTC	Off
Magn. Preparation	None
Flip Angle	140 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
Base Resolution	624
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	TSE/Separate

Resolution - Acceleration

Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	24
Distance Factor	0 %
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
Phase Oversampling	50 %
FoV Read	220 mm
FoV Phase	75.0 %
Slice Thickness	2.0 mm
TR	600.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R4.0 A175.2 H11.3 mm
Orientation	C > T4.4 > S3.1
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R4.0 A175.2 H11.3
R	4.0 mm
A	175.2 mm
H	11.3 mm
Initial Orientation	C > T
C > T	4.40
> S	3.10
Initial Rotation	0.34 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L

System - Miscellaneous

Coronal	A >> P
Transversal	H >> F
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	600.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	220 mm
FoV Phase	75.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On

Inline - MIP

MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Fast
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	195 Hz/Px
Echo Spacing	9.47 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	3
Echo Trains per Slice	82

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\MSK Hand SMS\t1_tse_tra_448_s2 *

TA: 2:58 min Coil Selection: Auto Voxel Size: 0.4×0.4×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	840.0 ms
TE	10.00 ms
Averages	2
Concatenations	3
AutoAlign	---

Contrast - Common

TR	840.0 ms
TE	10.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	320
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	840.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	3

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

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	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	840.0 ms
Concatenations	3

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	120 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	3

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	200 Hz/Px
Echo Spacing	10.2 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	4
Echo Trains per Slice	31

Sequence - Part 2

Introduction	Off
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	800.0 ms
Allowed Delay	30 s

\\USER\MSK Leeds\SMS Only Sequences\MSK Hand SMS\t2_tse_fs_tra_p2_s2_336 *

TA: 2:12 min Coil Selection: Auto Voxel Size: 0.5×0.5×3.0 mm³ Acc:: 4 Rel. SNR: 1.00

Properties

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	6460.0 ms
TE	68.00 ms
Averages	2
Concatenations	1
AutoAlign	---

Contrast - Common

TR	6460.0 ms
TE	68.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	150 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	240
Phase Resolution	70 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS

Resolution - Acceleration

Reference Scans	TSE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
SMS Factor	2
FOV Shift Factor	4
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	82
Distance Factor	10 %
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
Phase Oversampling	10 %
FoV Read	120 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	6460.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	R11.9 P122.4 F11.3
R	11.9 mm
P	122.4 mm
F	11.3 mm
Initial Orientation	T > S
T > S	-39.00
> C	-3.30
Initial Rotation	90.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	11 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
Store Coil Selection	Off
MSMA	S - C - T

System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R11.9 P122.4 F11.3 mm
Orientation	T > S-39.0 > C-3.3
Rotation	90.00 deg
R >> L	120 mm
A >> P	120 mm
F >> H	271 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.680489 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	6460.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	None
Dark Blood	Off
FoV Read	120 mm
FoV Phase	100.0 %
Phase Resolution	70 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off

Inline - MIP

Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off

Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	198 Hz/Px
Echo Spacing	9.70 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	12
Echo Trains per Slice	8

Sequence - Part 2

Introduction	On
Phase Correction	Off
Compensate T2 Decay	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle, TR
Min Flip Angle	130 deg
Max. TR	6000.0 ms
Allowed Delay	30 s