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\\USER

MRE

Elastography_1.5T

Siemens_1.5T_MRE

[epiMRE_tra_p2_bh_4slc](#)
[greMRE_tra_p2_mbh_128](#)

\\USER\MRE\Elastography_1.5T\Siemens_1.5T_MRE\epiMRE_tra_p2_bh_4slc
TA: 13 sec Coil Selection: Auto Voxel Size: 1.6×1.6×8.0 mm ³ 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	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	4
Distance Factor	25 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	420 mm
FoV Phase	100.0 %
Slice Thickness	8.0 mm
TR	1200.0 ms
TE	47.00 ms
Averages	1
Concatenations	1
AutoAlign	---
Coil Elements	BY1-3;SP2,3

Contrast - Common

TR	1200.0 ms
TE	47.00 ms
Fat-Water Contrast	SPAIR
Fat Saturation	Strong

Contrast - Dynamic

Dynamic Mode	Standard
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Resolution - Common

FoV Read	420 mm
FoV Phase	100.0 %
Slice Thickness	8.0 mm
Base Resolution	100
Phase Resolution	100 %

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	EPI/Separate
Acceleration Factor PE	2
Reference Lines PE	32
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	On
Elliptical Filter	Off
Hamming	Off
Distortion Correction	2D

Resolution - Filter

Normalize	Prescan
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Geometry - Common

Slice Group	1
Slices	4
Distance Factor	25 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	420 mm
FoV Phase	100.0 %
Slice Thickness	8.0 mm
TR	1200.0 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 - Saturation

Special Saturation	Parallel F/H
Gap	10.00 mm
Thickness	80.00 mm

Geometry - Tim Planning Suite

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

System - Miscellaneous

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

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
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	420 mm
R >> L	420 mm
F >> H	38 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.600000 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	epseMRE
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Fast
Bandwidth	2174 Hz/Px
Echo Spacing	0.54 ms
Free Echo Spacing	Off
EPI Factor	100

Sequence - Part 2

Introduction	Off
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\\USER\MRE\Elastography_1.5T\Siemens_1.5T_MRE\greMRE_tra_p2_mbh_128

TA: 1:30 min Coil Selection: Auto Voxel Size: 1.6×1.6×10.0 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	On
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	4
Distance Factor	0 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	420 mm
FoV Phase	79.7 %
Slice Thickness	10.0 mm
TR	50.0 ms
TE	22.42 ms
Averages	1
Coil Elements	BY1-3;SP2,3

Contrast - Common

TR	50.0 ms
TE	22.42 ms
Magn. Preparation	None
Flip Angle	25 deg

Contrast - Dynamic**Resolution - Common**

FoV Read	420 mm
FoV Phase	79.7 %
Slice Thickness	10.0 mm
Base Resolution	128
Phase Resolution	100 %
Interpolation	On

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	Integrated
Acceleration Factor PE	2
Reference Lines PE	24
Phase Partial Fourier	6/8
Asymmetric Echo	Off

Resolution - Filter

Distortion Correction	2D
Normalize	Prescan

Geometry - Common

Slice Group	1
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Geometry - Common

Slices	4
Distance Factor	0 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	420 mm
FoV Phase	79.7 %
Slice Thickness	10.0 mm
TR	50.0 ms
Series	Ascending

Geometry - AutoAlign

Slice Group	1
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
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**

Saturation Mode	Standard
Special Saturation	Parallel F/H
Gap	10.00 mm
Thickness	50.00 mm

Geometry - Tim Planning Suite

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

System - Miscellaneous

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

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
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	335 mm

System - Adjust Volume

R >> L	420 mm
F >> H	40 mm
Reset	Off

System - Tx/Rx

Frequency 1H	63.600000 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	50.0 ms

Physio - PACE

Resp. Control	Breath-hold
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Sequence - Part 1

Sequence Name	greMRE_r
Dimension	2D
Excitation	Slice-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	On
Bandwidth	399 Hz/Px
Echo Spacing	25.85 ms
Asymmetric Echo	Off

Sequence - Part 2

RF Spoiling	On
Phase Enc. Rewinder	On

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MRE

MRE_3T

Siemens_3T_MRE

[epiMRE_tra_p2_bh_4slc](#)

[greMRE_tra_p2_mbh_128_4slc](#)

\\USER\MREMRE_3T\Siemens_3T_MRE\epi\MRE_tra_p2_bh_4slc

TA: 13 sec Coil Selection: Auto Voxel Size: 1.6×1.6×8.0 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	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	4
Distance Factor	25 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	420 mm
FoV Phase	100.0 %
Slice Thickness	8.0 mm
TR	1200.0 ms
TE	48.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	1200.0 ms
TE	48.00 ms
Fat-Water Contrast	SPAIR
Fat Saturation	Strong

Contrast - Dynamic

Dynamic Mode	Standard
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Resolution - Common

FoV Read	420 mm
FoV Phase	100.0 %
Slice Thickness	8.0 mm
Base Resolution	100
Phase Resolution	100 %

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	EPI/Separate
Acceleration Factor PE	2
Reference Lines PE	32
Phase Partial Fourier	Off

Resolution - Filter

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

Geometry - Common

Slice Group	1
Slices	4
Distance Factor	25 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	420 mm
FoV Phase	100.0 %
Slice Thickness	8.0 mm
TR	1200.0 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 - Saturation

Special Saturation	Parallel F/H
Gap	10.00 mm
Thickness	50.00 mm

Geometry - Tim Planning Suite

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

System - Miscellaneous

Coil Selection	Auto Coil Select
MSMA	S - C - T
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
B1 Shim	TrueForm
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	420 mm
R >> L	420 mm
F >> H	38 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.200000 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Sequence - Part 1

Sequence Name	epseMRE
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Fast
Bandwidth	2174 Hz/Px
Echo Spacing	0.52 ms
Free Echo Spacing	Off
EPI Factor	100

Sequence - Part 2

Introduction	Off
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\\USER\MRE\MRE_3T\Siemens_3T_MRE\greMRE_tra_p2_mbh_128_4slc

TA: 2:52 min Coil Selection: Auto Voxel Size: 1.6×1.6×10.0 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	On
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	4
Distance Factor	0 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	420 mm
FoV Phase	87.5 %
Slice Thickness	10.0 mm
TR	50.0 ms
TE	21.29 ms
Averages	1

Contrast - Common

TR	50.0 ms
TE	21.29 ms
Magn. Preparation	None
Flip Angle	25 deg

Contrast - Dynamic**Resolution - Common**

FoV Read	420 mm
FoV Phase	87.5 %
Slice Thickness	10.0 mm
Base Resolution	128
Phase Resolution	71 %
Interpolation	On

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	Integrated
Acceleration Factor PE	2
Reference Lines PE	10
Phase Partial Fourier	Off
Asymmetric Echo	Off

Resolution - Filter

Distortion Correction	2D
Normalize	Prescan

Geometry - Common

Slice Group	1
Slices	4

Geometry - Common

Distance Factor	0 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	420 mm
FoV Phase	87.5 %
Slice Thickness	10.0 mm
TR	50.0 ms
Series	Ascending

Geometry - AutoAlign

Slice Group	1
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
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**

Saturation Mode	Standard
Special Saturation	Parallel F/H
Gap	10.00 mm
Thickness	60.00 mm

Geometry - Tim Planning Suite

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

System - Miscellaneous

Coil Selection	Auto Coil Select
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	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	Isocenter
Orientation	Transversal

System - Adjust Volume

Rotation	0.00 deg
A >> P	368 mm
R >> L	420 mm
F >> H	40 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.200000 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	2.000

Physio - Signal

1st Signal/Mode	None
TR	50.0 ms

Physio - PACE

Resp. Control	Breath-hold
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Sequence - Part 1

Sequence Name	greMRE_r
Dimension	2D
Excitation	Slice-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	On
Bandwidth	399 Hz/Px
Echo Spacing	24.32 ms
Asymmetric Echo	Off

Sequence - Part 2

RF Spoiling	On
Phase Enc. Rewinder	On