Practicum Team Project Report

Team Name: Asia

Summary (30-50 words):

Table 1: List of Scanners used by team members at their sites

Scanner	Make	Model	Current Software Version	RF coil
3 Tesla	Siemens	Skyra 3T	B13	Body coils 18 elemnts

Pictorial overview of CMR protocol before and after SwiM

Our CMR protocol can not change because it depends on our head of department.
Protocol of myocarditis :

LOCALIZER_COR
LOCALIER_SAG
TRUFI_TRA_NOGAP
THORAX_COR
THORAX_TRA
AAHEART_SCOUT
DEFINELONGAXIS
CINE_SEGMENTED_LAX
DEFINE_SAX
CINE_SEGMENTED_SAX
FREQUENCY SCOUT
CINE_SEGMENTED_LAX
INJECT CONTRAST
DYNAMIC STRESS
DYNAMIC REST
TI SCOUT
DE_OVERVIEW
DE_SEG_HIGH-RES_LAX
DE_SEG_HIGH-RES_SAX

Table of Contents of the CMR Scan parameter protocols complied for the scanners

Parameters

	TR (ms)	TE (ms)	FA	SL	FOV	PHASE ENC	GATING	BH
LOCALIZER_COR	290	1.33	80	8	400	R-L	ECG/prospective	YES
LOCALIER_SAG	256	1.13	80	8	400	A-P	ECG/prospective	YES
TRUFI_TRA_NOGAP	230	1.2	60	7	360	A-P	ECG/prospective	YES
THORAX_COR	723	49	142	8	400	R-L	ECG/prospective	YES
THORAX_TRA	723	49	142	8	400	A-P	ECG/prospective	YES
AAHEART_SCOUT	248	1.1	80	10	400	A-P	ECG/prospective	YES
DEFINELONGAXIS	240	1.06	80	8	500	R-L	ECG/prospective	YES
CINE_SEGMENTED_LAX	38.4	1.41	80	6	340	A-P	ECG/retro	YES
DEFINE_SAX	240	1.06	80	8	500	R-L	ECG/prospective	YES
CINE_SEGMENTED_SAX	48.3	1.42	80	8	320	A-P	ECG/retro	YES
FREQUENCY SCOUT								
CINE_SEGMENTED_LAX	38.4	1.41	80	6	340	A-P	ECG/retro	YES
INJECT CONTRAST								
DYNAMIC STRESS	155	1.03	10	8	360	A-P	ECG/retro	YES
DYNAMIC REST	155	1.03	10	8	360	A-P	ECG/retro	YES
TI SCOUT	28.71	1.41	35	8	340	A-P	ECG/prospective	YES
DE_OVERVIEW	700	1.09	40	8	340	A-P	ECG/prospective	YES
DE_SEG_HIGH-RES_LAX	700	1.96	20	8	350	A-P	ECG/prospective	YES
DE_SEG_HIGH-RES_SAX	700	1.96	20	8	350	A-P	ECG/prospective	YES

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*Localizer
TA:1.4 s PAT:2 Voxel size:1.6×1.6×8.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	1
Slices	3
Dist. factor	200 %
Position	L0.0 P15.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
FoV read	400 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	291.79 ms
TE	1.33 ms
Averages	1
Concatenations	3
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1-3;SP1-3

Contrast

TD	0 ms
Magn. preparation	None
Flip angle	80 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	66 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	46
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	On
TD	0 ms
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	1
Slices	3
Dist. factor	200 %
Position	L0.0 P15.0 H0.0 mm
Phase enc. dir.	R >> L
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Descending
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Tune up
Adjust with body coil	On
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	Isocenter
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm
Frequency 1H	123.233161 MHz
Correction factor	1
PrepExc 1H	453.715 V
Gain	High
Table position	0 mm

Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	None
Segments	84
Tagging	None
Magn. preparation	None
Dark blood	Off
Cine	Off
Trajectory	Cartesian
Inline Evaluation	Off
Resp. control	Off
Dummy heartbeats	0

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	1149 Hz/Px
Optimization	Min. TE
Allowed delay	0 s
Echo spacing	3 ms
Sequence type	Trufi
Define	Shots
Shots per slice	1
Trufi delta freq.	0 Hz
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Min flip angle
Min flip angle	45 deg

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*Localizer@Isocenter
TA:0:14 PAT:3 Voxel size:1.6×1.6×8.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	3
Slices	11
Dist. factor	33 %
Position	L45.0 P0.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	400 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	181.96 ms
TE	1.13 ms
Averages	1
Concatenations	17
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1-3;SP1-3

Contrast

TD	0 ms
Magn. preparation	None
Flip angle	80 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	66 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	On
TD	0 ms
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	3
Slices	11
Dist. factor	33 %
Position	L45.0 P0.0 H0.0 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Descending
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
! Position	L25.0 P0.0 H0.0 mm
! Rotation	0.00 deg
! F >> H	150 mm
! A >> P	150 mm
! R >> L	150 mm
Frequency 1H	123.233161 MHz
Correction factor	1
PrepExc 1H	525.600 V
Gain	High
Table position	0 mm

Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	800 ms
Trigger pulse	1
Trigger delay	400 ms
Segments	56
Adaptive Triggering	On
Trigger Lock Time	300 ms
Tagging	None
Magn. preparation	None
Dark blood	Off
Phases	1
Cine	Off
Trajectory	Cartesian
Inline Evaluation	Off
Resp. control	Off
Dummy heartbeats	0

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	1149 Hz/Px
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	2.7 ms
Sequence type	Trufi
Define	Shots
Shots per slice	1
Trufi delta freq.	0 Hz
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Min flip angle
Min flip angle	45 deg

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*Thorax_Cor_Tra
TA:0:35 PAT:2 Voxel size:1.6×1.6×8.0 mm Rel. SNR:1.00 :h

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	On
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	2
Slices	20
Dist. factor	50 %
Position	L0.0 P8.7 H35.8 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	30 %
FoV read	400 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	723.0 ms
TE	58.0 ms
Averages	1
Concatenations	2
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	BO1-3;SP1-3

Contrast

MTC	Off
Magn. preparation	None
Flip angle	142 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Long term
Measurements	1
Reconstruction	Magnitude
Multiple series	Off

Resolution

Base resolution	256
Phase resolution	56 %
Phase partial Fourier	4/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	20
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

Geometry

Nr. of slice groups	2
Slices	20
Dist. factor	50 %
Position	L0.0 P8.7 H59.8 mm
Phase enc. dir.	A >> P
Phase oversampling	30 %
Multi-slice mode	Single shot
Series	Ascending
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Water suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off
Restore magn.	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	Isocenter
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm
Frequency 1H	123.233161 MHz
Correction factor	1
Excit 1H	261.191 V
Gain	High
Table position	24 mm

Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	723 ms
Trigger pulse	1
Trigger delay	0 ms
Magn. preparation	None
Dark blood	On
Dark blood thickness	200 %
Dark blood flip angle	200 deg
Phases	1
Resp. control	Breath-hold

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Long term
Multi-slice mode	Single shot
Contrasts	1
Bandwidth	514 Hz/Px
Flow comp.	No
Allowed delay	10 s
Echo spacing	5.28 ms
Turbo factor	143
RF pulse type	Normal
Gradient mode	Fast
Hyperecho	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Off

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*AAHeart_Scout
TA:0:16 PAT:2 Voxel size:1.6×1.6×10.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	1
Slices	18
Dist. factor	0 %
Position	L15.0 P15.0 F30.0 mm
Orientation	T > C-35.2 > S29.8
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	400 mm
FoV phase	100.0 %
Slice thickness	10.0 mm
TR	248.34 ms
TE	1.10 ms
Averages	1
Concatenations	18
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1-3;SP1-3

Contrast

TD	0 ms
Magn. preparation	None
Flip angle	80 deg
Fat suppr.	None
Averaging mode	Long term
Measurements	1
Reconstruction	Magnitude
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	64 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	On
TD	0 ms
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	1
Slices	18
Dist. factor	0 %
Position	L15.0 P15.0 F30.0 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Single shot
Series	Descending
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	L15.0 P15.0 F30.0 mm
Rotation	19.32 deg
R >> L	400 mm
A >> P	400 mm
F >> H	180 mm
Frequency 1H	123.233161 MHz
Correction factor	1
PrepExc 1H	525.600 V
Gain	High
Table position	0 mm

Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	898 ms
Trigger pulse	1
Trigger delay	150 ms
Segments	82
Adaptive Triggering	On
Trigger Lock Time	300 ms
Tagging	None
Magn. preparation	None
Dark blood	Off
Phases	1
Cine	Off
Trajectory	Cartesian
Inline Evaluation	Off
Resp. control	Off
Dummy heartbeats	0

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Long term
Multi-slice mode	Single shot
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	1149 Hz/Px
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	2.6 ms
Sequence type	Trufi
Define	Shots
Shots per slice	1
Trufi delta freq.	0 Hz
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Min flip angle
Min flip angle	45 deg

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*trufi_tra_nogap
TA:0:14 PAT:2 Voxel size:1.4×1.4×7.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	1
Slices	22
Dist. factor	0 %
Position	L1.0 P0.0 H23.2 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	360 mm
FoV phase	75.0 %
Slice thickness	7.0 mm
TR	230.63 ms
TE	1.20 ms
Averages	1
Concatenations	22
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1,2;SP1,2

Contrast

TD	0 ms
Magn. preparation	None
Flip angle	60 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	70 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	26
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	On
TD	0 ms
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	1
Slices	22
Dist. factor	0 %
Position	L1.0 P0.0 H27.2 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Descending
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	Off
HE2	Off
HE4	Off
NE2	Off
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	Off
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Sum of Squares
AutoAlign	---
Coil Select Mode	Default
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
! Position	L16.3 P29.1 H23.2 mm
! Rotation	0.00 deg
! F >> H	134 mm
! A >> P	127 mm
! R >> L	133 mm
Frequency 1H	123.233161 MHz
Correction factor	1

PrepExc 1H	525.600 V
Gain	High
Table position	4 mm
Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	642 ms
Trigger pulse	1
Trigger delay	411 ms
Segments	67
Adaptive Triggering	Off
Tagging	None
Magn. preparation	None
Dark blood	Off
Phases	1
Cine	Off
Trajectory	Cartesian
Inline Evaluation	Off
Resp. control	Off
Dummy heartbeats	0

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	849 Hz/Px
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	2.9 ms
Sequence type	Trufi
Define	Shots
Shots per slice	1
Trufi delta freq.	0 Hz
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1,2;SP1,2
Acquisition duration	0 ms
Mode	Off

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

\\USER\heart\Sep 19\Routine DOT*DefineLongaxis
TA:0.8 s PAT:2 Voxel size:2.0×2.0×8.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L0.0 A30.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
FoV read	500 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	240.41 ms
TE	1.06 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	None
Flip angle	80 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	66 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L0.0 A30.0 H0.0 mm
Phase enc. dir.	R >> L
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Descending
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	L0.0 A30.0 H0.0 mm
Rotation	0.00 deg
F >> H	500 mm
R >> L	500 mm
A >> P	8 mm
Frequency 1H	123.233161 MHz
Correction factor	1
PrepExc 1H	525.600 V
Gain	High
Table position	0 mm

Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	800 ms
Trigger pulse	1
Trigger delay	400 ms
Segments	84
Adaptive Triggering	On
Trigger Lock Time	300 ms
Tagging	None
Magn. preparation	None
Dark blood	Off
Phases	1
Cine	Off
Trajectory	Cartesian
Inline Evaluation	Off
Resp. control	Off
Dummy heartbeats	0

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	1149 Hz/Px
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	2.5 ms
Sequence type	Trufi
Define	Shots
Shots per slice	1
Trufi delta freq.	0 Hz
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Min flip angle
Min flip angle	45 deg

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*CINE_segmented_LAX
TA:7.0 s PAT:3 Voxel size:1.6×1.6×6.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	On
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L4.2 A1.0 H24.6 mm
Orientation	T > C32.0 > S-12.2
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	340 mm
FoV phase	83.7 %
Slice thickness	6.0 mm
TR	39.24 ms
TE	1.43 ms
Averages	1
Filter	Distortion Corr.(2D), Prescan Normalize, Image Filter
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	None
Flip angle	80 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude
Multiple series	Each slice

Resolution

Base resolution	208
Phase resolution	80 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Reference scan mode	Integrated
Image Filter	On
! Intensity	Medium
Edge Enhancement	1
Smoothing	3
Unfiltered images	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L4.2 A1.0 H24.6 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Base To Apex
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Sum of Squares
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	L4.2 A1.0 H24.6 mm
Rotation	7.56 deg
R >> L	340 mm
A >> P	285 mm
F >> H	6 mm
Frequency 1H	123.233161 MHz
Correction factor	1
PreScan 1H	265.267 V
Gain	High
Table position	0 mm

Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Retro
Average cycle	No Signal ms
Segments	12
Tagging	None
Magn. preparation	None
Dark blood	Off
Calculated phases	25
Concatenations	1
Arrhythmia detection	None
Concatenations	1
Cine	On
Trajectory	Cartesian
Inline Evaluation	Ventricular Function
Resp. control	Breath-hold
View sharing	Off
Dummy heartbeats	1
Concatenations	1

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	962 Hz/Px
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	3.3 ms
Sequence type	Trufi
Define	Segments
Trufi delta freq.	0 Hz
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	On
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Min flip angle
Min flip angle	45 deg

BOLD

View sharing	Off
Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*FrequencyScout
TA:0:10 PAT:2 Voxel size:1.3×1.3×6.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L4.2 A1.0 H24.6 mm
Orientation	T > C32.0 > S-12.2
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	340 mm
FoV phase	81.3 %
Slice thickness	6.0 mm
TR	350.53 ms
TE	1.45 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	None
Flip angle	50 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	13
Pause after meas. 1	0.0 s
Reconstruction	Magnitude
Multiple series	Off

Resolution

Base resolution	256
Phase resolution	76 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L4.2 A1.0 H24.6 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Interleaved
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Default
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	L4.2 A1.0 H24.6 mm
Rotation	7.56 deg
R >> L	340 mm
A >> P	277 mm
F >> H	6 mm
Frequency 1H	123.233161 MHz
Correction factor	1
PrepExc 1H	283.572 V
Gain	High
Table position	0 mm

Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	801 ms
Trigger pulse	1
Trigger delay	450 ms
Segments	91
Tagging	None
Magn. preparation	None
Dark blood	Off
Phases	1
Cine	Off
Trajectory	Cartesian
Dummy heartbeats	0

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Allowed
Bandwidth	751 Hz/Px
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	3.4 ms
Sequence type	Trufi
Define	Shots
Shots per slice	1
Trufi delta freq.	150 Hz
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Off

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Save original images	On

\\USER\heart\Sep 19\Routine DOT*CINE_segmented_LAX
TA:7.0 s PAT:3 Voxel size:1.6×1.6×6.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	On
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L4.2 A1.0 H24.6 mm
Orientation	T > C32.0 > S-12.2
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	340 mm
FoV phase	83.7 %
Slice thickness	6.0 mm
TR	39.24 ms
TE	1.43 ms
Averages	1
Filter	Distortion Corr.(2D), Prescan Normalize, Image Filter
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	None
Flip angle	80 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude
Multiple series	Each slice

Resolution

Base resolution	208
Phase resolution	80 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Reference scan mode	Integrated
Image Filter	On
! Intensity	Medium
Edge Enhancement	1
Smoothing	3
Unfiltered images	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L4.2 A1.0 H24.6 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Base To Apex
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Sum of Squares
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	L4.2 A1.0 H24.6 mm
Rotation	7.56 deg
R >> L	340 mm
A >> P	285 mm
F >> H	6 mm
Frequency 1H	123.233161 MHz
Correction factor	1
PreScan 1H	265.267 V
Gain	High
Table position	0 mm

Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Retro
Average cycle	No Signal ms
Segments	12
Tagging	None
Magn. preparation	None
Dark blood	Off
Calculated phases	25
Concatenations	1
Arrhythmia detection	None
Concatenations	1
Cine	On
Trajectory	Cartesian
Inline Evaluation	Ventricular Function
Resp. control	Breath-hold
View sharing	Off
Dummy heartbeats	1
Concatenations	1

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	962 Hz/Px
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	3.3 ms
Sequence type	Trufi
Define	Segments
Trufi delta freq.	0 Hz
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	On
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Min flip angle
Min flip angle	45 deg

BOLD

View sharing	Off
Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*DefineSAX
TA:0.8 s PAT:2 Voxel size:2.0×2.0×8.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L0.0 A30.0 H0.0 mm
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
FoV read	500 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	240.41 ms
TE	1.06 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	None
Flip angle	80 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	66 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L0.0 A30.0 H0.0 mm
Phase enc. dir.	R >> L
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Descending
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	L0.0 A30.0 H0.0 mm
Rotation	0.00 deg
F >> H	500 mm
R >> L	500 mm
A >> P	8 mm
Frequency 1H	123.233161 MHz
Correction factor	1
PrepExc 1H	525.600 V
Gain	High
Table position	0 mm

Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	800 ms
Trigger pulse	1
Trigger delay	400 ms
Segments	84
Adaptive Triggering	On
Trigger Lock Time	300 ms
Tagging	None
Magn. preparation	None
Dark blood	Off
Phases	1
Cine	Off
Trajectory	Cartesian
Inline Evaluation	Off
Resp. control	Off
Dummy heartbeats	0

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	1149 Hz/Px
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	2.5 ms
Sequence type	Trufi
Define	Shots
Shots per slice	1
Trufi delta freq.	0 Hz
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Min flip angle
Min flip angle	45 deg

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*CINE_segmented_SAX
TA:6.0 s PAT:3 Voxel size:1.6×1.6×8.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	On
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L4.2 A1.0 H24.6 mm
Orientation	T > C32.0 > S-12.2
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	340 mm
FoV phase	77.9 %
Slice thickness	8.0 mm
TR	45.64 ms
TE	1.43 ms
Averages	1
Filter	Distortion Corr.(2D), Prescan Normalize, Image Filter
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	None
Flip angle	80 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude
Multiple series	Each slice

Resolution

Base resolution	208
Phase resolution	70 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Reference scan mode	Integrated
Image Filter	On
! Intensity	Medium
Edge Enhancement	1
Smoothing	3
Unfiltered images	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L4.2 A1.0 H24.6 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Base To Apex
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Sum of Squares
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
Position	L4.2 A1.0 H24.6 mm
Rotation	7.56 deg
R >> L	340 mm
A >> P	265 mm
F >> H	8 mm
Frequency 1H	123.233161 MHz
Correction factor	1
PreScan 1H	265.267 V
Gain	High
Table position	0 mm

Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Retro
Average cycle	No Signal ms
Segments	14
Tagging	None
Magn. preparation	None
Dark blood	Off
Calculated phases	25
Concatenations	1
Arrhythmia detection	None
Concatenations	1
Cine	On
Trajectory	Cartesian
Inline Evaluation	Ventricular Function
Resp. control	Breath-hold
View sharing	Off
Dummy heartbeats	1
Concatenations	1

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	962 Hz/Px
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	3.3 ms
Sequence type	Trufi
Define	Segments
Trufi delta freq.	0 Hz
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	On
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Min flip angle
Min flip angle	45 deg

BOLD

View sharing	Off
Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*DynamicStress
TA:0:45 PAT:2 Voxel size:1.9×1.9×8.0 mm Rel. SNR:1.00 :tfl

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	On
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	On
Wait for user to start	On
Start measurements	single

Routine

Nr. of slice groups	4
Slices	1
Dist. factor	20 %
Position	L4.4 P40.9 H26.2 mm
Orientation	C > T38.5 > S3.8
Phase enc. dir.	F >> H
AutoAlign	---
Phase oversampling	0 %
FoV read	360 mm
FoV phase	79.2 %
Slice thickness	8.0 mm
TR	158.05 ms
TE	1.03 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D)
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	Non-sel. SR perf
TI	100 ms
Flip angle	10 deg
Fat suppr.	None
Averaging mode	Long term
Measurements	70
Pause after meas.	0.0 s
Reconstruction	Magnitude
Multiple series	Each slice
Proton Dens. Maps	2

Resolution

Base resolution	192
Phase resolution	74 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	128
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	4
Slices	1
Dist. factor	20 %
Position	L4.4 P40.9 H30.2 mm
Phase enc. dir.	F >> H
Phase oversampling	0 %
Multi-slice mode	Single shot
Series	Descending
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
HE2	Off
HE4	Off
NE2	Off
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
! Position	L16.3 P29.1 H43.2 mm
! Rotation	0.00 deg
! F >> H	134 mm
! A >> P	127 mm
! R >> L	133 mm
Frequency 1H	123.233161 MHz
Correction factor	1

PPsqulSR1 1H	438.000 V
Gain	High
Table position	4 mm
Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	638 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	56
Adaptive Triggering	On
Trigger Lock Time	499 ms
Tagging	None
Magn. preparation	Non-sel. SR perf
TI	100 ms
Dark blood	Off
Phases	1
Cine	Off
Trajectory	Cartesian
Inline Evaluation	Time Course Filtered
Resp. control	Off
Dummy heartbeats	0
Motion Correction	Standard

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Long term
Multi-slice mode	Single shot
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	1002 Hz/Px
Flow comp.	No
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	2.1 ms
Sequence type	Gre
Define	Shots
Shots per slice	1
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
RF spoiling	On
Phase Enc. Rewinder	On
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Off

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*DynamicRest
TA:0:46 PAT:2 Voxel size:1.9×1.9×8.0 mm Rel. SNR:1.00 :tfl

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	On
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	On
Wait for user to start	On
Start measurements	single

Routine

Nr. of slice groups	4
Slices	1
Dist. factor	20 %
Position	L4.5 P39.0 H27.8 mm
Orientation	C > T38.5 > S3.8
Phase enc. dir.	F >> H
AutoAlign	---
Phase oversampling	0 %
FoV read	360 mm
FoV phase	79.2 %
Slice thickness	8.0 mm
TR	158.05 ms
TE	1.03 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D)
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	Non-sel. SR perf
TI	100 ms
Flip angle	10 deg
Fat suppr.	None
Averaging mode	Long term
Measurements	70
Pause after meas.	0.0 s
Reconstruction	Magnitude
Multiple series	Each slice
Proton Dens. Maps	2

Resolution

Base resolution	192
Phase resolution	74 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	128
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	4
Slices	1
Dist. factor	20 %
Position	L4.5 P39.0 H31.8 mm
Phase enc. dir.	F >> H
Phase oversampling	0 %
Multi-slice mode	Single shot
Series	Descending
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
HE2	Off
HE4	Off
NE2	Off
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
! Position	L16.3 P29.1 H47.2 mm
! Rotation	0.00 deg
! F >> H	134 mm
! A >> P	127 mm
! R >> L	133 mm
Frequency 1H	123.233161 MHz
Correction factor	1

PPsqulSR1 1H	438.000 V
Gain	High
Table position	4 mm
Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	660 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	56
Adaptive Triggering	On
Trigger Lock Time	499 ms
Tagging	None
Magn. preparation	Non-sel. SR perf
TI	100 ms
Dark blood	Off
Phases	1
Cine	Off
Trajectory	Cartesian
Inline Evaluation	Time Course Filtered
Resp. control	Off
Dummy heartbeats	0
Motion Correction	Standard

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Long term
Multi-slice mode	Single shot
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	1002 Hz/Px
Flow comp.	No
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	2.1 ms
Sequence type	Gre
Define	Shots
Shots per slice	1
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
RF spoiling	On
Phase Enc. Rewinder	On
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Off

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*TI-Scout
TA:0:10 PAT:Off Voxel size:1.8×1.8×8.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L58.5 P51.2 F22.8 mm
Orientation	T > S37.3 > C-30.1
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	340 mm
FoV phase	62.5 %
Slice thickness	8.0 mm
TR	28.71 ms
TE	1.41 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	TI Scout
Flip angle	35 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude
Multiple series	Off

Resolution

Base resolution	192
Phase resolution	50 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	1
Slices	1
Dist. factor	20 %
Position	L58.5 P51.2 F18.8 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Interleaved
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
HE2	Off
HE4	Off
NE2	Off
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Default
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
! Position	L16.3 P29.1 H35.2 mm
! Rotation	0.00 deg
! F >> H	134 mm
! A >> P	127 mm
! R >> L	133 mm
Frequency 1H	123.233161 MHz
Correction factor	1

PrepExc 1H	150.871 V
Gain	High
Table position	4 mm
Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	646 ms
Trigger pulse	2
Trigger delay	0 ms
Segments	9
Tagging	None
Magn. preparation	TI Scout
Dark blood	Off
Phases	19
Cine	On
Trajectory	Cartesian
Inline Evaluation	Off
Resp. control	Off
View sharing	Off
Dummy heartbeats	1

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Centric
Asymmetric echo	Weak
Contrasts	1
Bandwidth	965 Hz/Px
Optimization	Min. TE TR
Allowed delay	0 s
Echo spacing	3.2 ms
Sequence type	Trufi
Define	Segments
Trufi delta freq.	0 Hz
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	On
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Off

BOLD

View sharing	Off
Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

\\USER\heart\Sep 19\Routine DOT*DE_overview
TA:0:29 PAT:2 Voxel size:1.8×1.8×8.0 mm Rel. SNR:1.00 :tfi

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	4
Slices	1
Dist. factor	20 %
Position	L3.5 P58.1 H22.2 mm
Orientation	C > S-42.4 > T-0.1
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
FoV read	340 mm
FoV phase	84.4 %
Slice thickness	8.0 mm
TR	610.00 ms
TE	1.09 ms
Averages	1
Filter	Raw filter, Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	Non-sel. IR
TI	300 ms
Flip angle	40 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude/Real
Multiple series	Off

Resolution

Base resolution	192
Phase resolution	81 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	On
Intensity	Free
Slope	48
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	4
Slices	1
Dist. factor	20 %
Position	L3.5 P58.1 H26.2 mm
Phase enc. dir.	R >> L
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Base To Apex
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
HE2	Off
HE4	Off
NE2	Off
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
! Position	L16.3 P29.1 H59.2 mm
! Rotation	0.00 deg
! F >> H	134 mm
! A >> P	127 mm
! R >> L	133 mm
Frequency 1H	123.233161 MHz
Correction factor	1

PrepExc 1H	352.165 V
Gain	High
Table position	4 mm
Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	610 ms
Trigger pulse	2
Trigger delay	0 ms
Segments	78
Adaptive Triggering	Off
Tagging	None
Magn. preparation	Non-sel. IR
TI	300 ms
Dark blood	Off
Concatenations	2
Phases	1
Concatenations	2
Cine	Off
Trajectory	Cartesian
Inline Evaluation	Off
Resp. control	Breath-hold
Dummy heartbeats	1
Concatenations	2

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	1184 Hz/Px
Optimization	Min. TE
Allowed delay	0 s
Echo spacing	2.5 ms
Sequence type	Trufi
Define	Shots
Shots per slice	1
Trufi delta freq.	0 Hz
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Off

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

\\USER\heart\Sep 19\Routine DOT*DE_seg_high-res_SAX
TA:1:51 PAT:2 Voxel size:1.4×1.4×8.0 mm Rel. SNR:1.00 :fl

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	1
Slices	12
Dist. factor	25 %
Position	L56.8 P48.8 F11.0 mm
Orientation	T > S37.3 > C-30.1
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	350 mm
FoV phase	75.0 %
Slice thickness	8.0 mm
TR	654.00 ms
TE	1.96 ms
Averages	1
Filter	Raw filter, Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	Non-sel. IR
TI	320 ms
Flip angle	20 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude/Real
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	50
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	On
Intensity	Free
Slope	48
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	1
Slices	12
Dist. factor	25 %
Position	L56.8 P48.8 F7.0 mm
Phase enc. dir.	A >> P
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Base To Apex
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
HE2	Off
HE4	Off
NE2	Off
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
! Position	L16.3 P29.1 H63.2 mm
! Rotation	0.00 deg
! F >> H	134 mm
! A >> P	127 mm
! R >> L	133 mm
Frequency 1H	123.233161 MHz
Correction factor	1

PPsqulSR1 1H	438.000 V
Gain	High
Table position	4 mm
Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	654 ms
Trigger pulse	2
Trigger delay	0 ms
Segments	25
Adaptive Triggering	Off
Tagging	None
Magn. preparation	Non-sel. IR
TI	320 ms
Dark blood	Off
Concatenations	6
Phases	1
Concatenations	6
Cine	Off
Trajectory	Cartesian
Inline Evaluation	Off
Resp. control	Breath-hold
Dummy heartbeats	1
Concatenations	6

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	287 Hz/Px
Flow comp.	No
Optimization	Min. TE
Allowed delay	0 s
Echo spacing	5.2 ms
Sequence type	Gre
Define	Segments
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
RF spoiling	On
Phase Enc. Rewinder	On
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Off

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

SIEMENS MAGNETOM Skyra syngo MR D13

\\USER\heart\Sep 19\Routine DOT*DE_seg_high-res_LAX
TA:0:38 PAT:2 Voxel size:1.4×1.4×8.0 mm Rel. SNR:1.00 :fl

Properties

Prio Recon	Off
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Wait for user to start	Off
Start measurements	single

Routine

Nr. of slice groups	3
Slices	1
Dist. factor	20 %
Position	L3.5 P58.1 H14.2 mm
Orientation	C > S-42.4 > T-0.1
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
FoV read	350 mm
FoV phase	81.3 %
Slice thickness	8.0 mm
TR	602.00 ms
TE	1.98 ms
Averages	1
Filter	Raw filter, Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1-3;SP1-3

Contrast

Magn. preparation	Non-sel. IR
TI	360 ms
Flip angle	20 deg
Fat suppr.	None
Averaging mode	Short term
Measurements	1
Reconstruction	Magnitude/Real
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	50
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	On
Intensity	Free
Slope	48
Elliptical filter	Off
POCS	Off

Geometry

Nr. of slice groups	3
Slices	1
Dist. factor	20 %
Position	L3.5 P58.1 H18.2 mm
Phase enc. dir.	R >> L
Phase oversampling	0 %
Multi-slice mode	Sequential
Series	Interl. in B.-h.
Nr. of sat. regions	0
Position mode	L-P-H
Fat suppr.	None
Special sat.	None
Special sat.	None
Set-n-Go Protocol	Off
Table position	P
Inline Composing	Off

System

Body	Off
BO1	On
BO2	On
BO3	On
HE2	Off
HE4	Off
NE2	Off
SP5	Off
SP6	Off
SP7	Off
SP8	Off
SP1	On
SP2	On
SP3	On
SP4	Off
Position mode	L-P-H
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Coil Select Mode	Off - AutoCoilSelect
Shim mode	Cardiac
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto
? Ref. amplitude 1H	0.000 V
! Position	L16.3 P29.1 H67.2 mm
! Rotation	0.00 deg
! F >> H	134 mm
! A >> P	127 mm
! R >> L	133 mm
Frequency 1H	123.233161 MHz
Correction factor	1

PPsqulSR1 1H	438.000 V
Gain	High
Table position	4 mm
Img. Scale. Cor.	1.000

Physio

1st Signal/Mode	ECG/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	602 ms
Trigger pulse	2
Trigger delay	0 ms
Segments	25
Adaptive Triggering	Off
Tagging	None
Magn. preparation	Non-sel. IR
TI	360 ms
Dark blood	Off
Concatenations	3
Phases	1
Concatenations	3
Cine	Off
Trajectory	Cartesian
Inline Evaluation	Off
Resp. control	Breath-hold
Dummy heartbeats	1
Concatenations	3

Inline

Inline Composing	Off
Distortion correction	Off

Sequence

Introduction	Off
Dimension	2D
Averaging mode	Short term
Multi-slice mode	Sequential
Reordering	Linear
Asymmetric echo	Weak
Contrasts	1
Bandwidth	287 Hz/Px
Flow comp.	No
Optimization	Min. TE
Allowed delay	0 s
Echo spacing	5.2 ms
Sequence type	Gre
Define	Segments
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slice-sel.
Flip angle mode	Constant
RF spoiling	On
Phase Enc. Rewinder	On
Cine	Off
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	BO1-3;SP1-3
Acquisition duration	0 ms
Mode	Off

BOLD

Subtract	Off
StdDev	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Contrasts	1
Save original images	On

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