SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\AMRIT\Liyong2\df\fl_fq_mb_gre_3D_CA0_m2f1

TA: 10:01 PAT: 3 Voxel size: 1.6×1.6×1.6 mm Rel. SNR: 1.00 USER: fl_fq_mb_gre_3D_CA

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	2
Dist. factor	120 %
Position	R1.2 A7.0 F12.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	18
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
TR	27.15 ms
TE	4.54 ms
Averages	1
Concatenations	2
Filter	None
Coil elements	HEA;HEP

Contrast

Flip angle	15 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1
Ref. lines 3D	18
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	None

System

Body	Off
HEP	On
HEA	On
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	776 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	1
Phases	28

Angio

Flow mode	Single vel.
Encodings	3
Velocity enc.	60 cm/s
Direction 1	Through plane
Direction 2	A >> P
Direction 3	F >> H
Rephased images	On
Magnitude images	On
Magnitude sum	Off
Phase images	On
Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off

MIP-Time	Off
Save original images	On

Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	501 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Fast*
RF spoiling	On
MB Number	2
FOV Shift	1
CA(intraSlab)	0

\\USER\AMRIT\Liyong2\df\fl_fq_mb_gre_3D_CA0_m1f1_sag

TA: 14:55 PAT: 2 Voxel size: 1.6×1.6×1.6 mm Rel. SNR: 1.00 USER: fl_fq_mb_gre_3D_CA

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	120 %
Position	R32.9 A7.0 F12.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	18
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
TR	27.15 ms
TE	4.54 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

Contrast

Flip angle	15 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Ref. lines 3D	18
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	None

System

Body	Off
HEP	On
HEA	On
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	776 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	1
Phases	28

Angio

Flow mode	Single vel.
Encodings	3
Velocity enc.	60 cm/s
Direction 1	Through plane
Direction 2	A >> P
Direction 3	F >> H
Rephased images	On
Magnitude images	On
Magnitude sum	Off
Phase images	On
Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off

MIP-Time	Off
Save original images	On

Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	501 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Fast*
RF spoiling	On
MB Number	1
FOV Shift	1
CA(intraSlab)	0

\\USER\AMRIT\Liyong2\df\fl_fq_mb_gre_3D_CA0_m2f1p2

TA: 14:55 PAT: 2 Voxel size: 1.6×1.6×1.6 mm Rel. SNR: 1.00 USER: fl_fq_mb_gre_3D_CA

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	2
Dist. factor	120 %
Position	R1.2 A7.0 F12.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	18
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
TR	27.15 ms
TE	4.54 ms
Averages	1
Concatenations	2
Filter	None
Coil elements	HEA;HEP

Contrast

Flip angle	15 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Ref. lines 3D	18
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	None

System

Body	Off
HEP	On
HEA	On
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	776 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	1
Phases	28

Angio

Flow mode	Single vel.
Encodings	3
Velocity enc.	60 cm/s
Direction 1	Through plane
Direction 2	A >> P
Direction 3	F >> H
Rephased images	On
Magnitude images	On
Magnitude sum	Off
Phase images	On
Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off

MIP-Time	Off
Save original images	On

Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	501 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Fast*
RF spoiling	On
MB Number	2
FOV Shift	1
CA(intraSlab)	0

\\USER\AMRIT\Liyong2\df\fl_fq_mb_gre_3D_CA0_m2f2_axial

TA: 14:55 PAT: 2 Voxel size: 1.1×1.1×1.1 mm Rel. SNR: 1.00 USER: fl_fq_mb_gre_3D_CA

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	2
Dist. factor	400 %
Position	R0.7 A15.2 H34.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	12
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.10 mm
TR	36.05 ms
TE	5.92 ms
Averages	1
Concatenations	2
Filter	None
Coil elements	HEA;HEP

Contrast

Flip angle	15 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	192
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Ref. lines 3D	12
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	None

System

Body	Off
HEP	On
HEA	On
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	776 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	1
Phases	21

Angio

Flow mode	Single vel.
Encodings	3
Velocity enc.	60 cm/s
Direction 1	Through plane
Direction 2	A >> P
Direction 3	R >> L
Rephased images	On
Magnitude images	On
Magnitude sum	Off
Phase images	On
Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off

MIP-Time	Off
Save original images	On

Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	299 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Fast*
RF spoiling	On
MB Number	2
FOV Shift	2
CA(intraSlab)	0

\\USER\AMRIT\Liyong2\df\PC_2D_sag

TA: 0:22 PAT: Off Voxel size: 1.0×0.8×40.0 mm Rel. SNR: 1.00 SIEMENS: fl_pc

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	1
Dist. factor	20 %
Position	R4.0 A13.8 F15.5
Orientation	C > T-6.8
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	40.0 mm
TR	34.85 ms
TE	7.12 ms
Averages	3
Concatenations	1
Filter	Elliptical filter
Coil elements	HEA;HEP

Contrast

Flip angle	10 deg
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

Geometry

Multi-slice mode	Sequential
Series	Interleaved
Special sat.	None

System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	R4.0 A13.8 F15.5
Orientation	C > T-6.8
Rotation	0.00 deg
F >> H	200 mm
R >> L	200 mm
A >> P	40 mm

Physio

1st Signal/Mode	None
Segments	1

Angio

Flow mode	Free
Encodings	2
Velocity enc. 1	30 cm/s
Velocity enc. 2	20 cm/s
Direction 1	F >> H
Direction 2	R >> L
Rephased images	Off
Magnitude images	Off
Magnitude sum	On
Phase images	On
Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Sequence

Introduction	On
Dimension	2D
Asymmetric echo	Weak
Contrasts	1
Bandwidth	212 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Whisper
RF spoiling	On

\\USER\AMRIT\Liyong2\df\localizer

TA: 0:13 PAT: Off Voxel size: 1.1×1.0×7.0 mm Rel. SNR: 1.00 SIEMENS: gre

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	7.0 mm
TR	8.6 ms
TE	4.00 ms
Averages	2
Concatenations	3
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

Contrast

TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	90 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

System

Body	Off
HEP	On
HEA	On
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	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	None
Segments	1
Dark blood	Off
Resp. control	Off

Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off

Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off

Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	320 Hz/Px
Flow comp.	No
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

\\USER\AMRIT\Liyong2\df\t1_fl2d_tra

TA: 1:38 PAT: Off Voxel size: 0.9×0.7×4.0 mm Rel. SNR: 1.00 SIEMENS: gre

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	25
Dist. factor	60 %
Position	L3.0 A17.6 H4.8
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	4.0 mm
TR	250.0 ms
TE	2.46 ms
Averages	2
Concatenations	1
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

Contrast

MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	320
Phase resolution	80 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	P >> A
Transversal	H >> F
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	None
Segments	1
Dark blood	Off
Resp. control	Off

Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off

Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	330 Hz/Px
Flow comp.	No
Allowed delay	60 s
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

\\USER\AMRIT\Liyong2\df\fl_fq_mb_gre_3D_seg

TA: 0:40 PAT: Off Voxel size: 1.2×1.2×5.0 mm Rel. SNR: 1.00 USER: fl_fq_mb_gre_3D_seg

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	150.00 ms
TE	10.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

Contrast

Flip angle	15 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Interleaved
Special sat.	None

System

Body	On
HEP	Off
HEA	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	None
Segments	1

Angio

Flow mode	Single dir.
Encodings	1
Velocity enc.	90 cm/s
Direction	Through plane
Rephased images	On
Magnitude images	On
Magnitude sum	Off
Phase images	On
Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Sequence

Introduction	On
Dimension	2D
Asymmetric echo	Off
Contrasts	1
Bandwidth	260 Hz/Px
Flow comp.	No
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
MB Number	1
FOV Shift	1

\\USER\AMRIT\Liyong2\df\fl_fq_mb_gre_3D_seg

TA: 1:48 PAT: Off Voxel size: 3.1×3.1×3.0 mm Rel. SNR: 1.00 USER: fl_fq_mb_gre_3D_seg

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	2
Dist. factor	100 %
Position	L0.0 A8.5 H3.0
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	12
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
TR	72.45 ms
TE	5.43 ms
Averages	1
Concatenations	2
Filter	None
Coil elements	HEA;HEP

Contrast

Flip angle	15 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	64
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Interleaved
Special sat.	None

System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	280 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	2
Phases	3

Angio

Flow mode	Single vel.
Encodings	3
Velocity enc.	90 cm/s
Direction 1	Through plane
Direction 2	A >> P
Direction 3	R >> L
Rephased images	On
Magnitude images	On
Magnitude sum	Off
Phase images	On
Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Sequence

Introduction	On

Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	260 Hz/Px
Flow comp.	No
RF pulse type	Normal
Gradient mode	Fast*
RF spoiling	On
MB Number	2
FOV Shift	2

\\USER\AMRIT\Liyong2\df\localizer

TA: 0:13 PAT: Off Voxel size: 1.1×1.0×7.0 mm Rel. SNR: 1.00 SIEMENS: gre

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	7.0 mm
TR	8.6 ms
TE	4.00 ms
Averages	2
Concatenations	3
Filter	Prescan Normalize, Elliptical filter
Coil elements	SP3-6

Contrast

TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	90 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

System

Body	Off
HEP	Off
HEA	Off
SP4	On
SP2	Off
SP8	Off
SP6	On
SP3	On
SP1	Off
SP7	Off
SP5	On
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	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	None
Segments	1

Dark blood	Off
Resp. control	Off

Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off

Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	320 Hz/Px
Flow comp.	No
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

\\USER\AMRIT\Liyong2\df\ep2d_venc8_fast_TP_pos2

TA: 1:20:25 PAT: 2 Voxel size: 1.6×1.6×5.0 mm Rel. SNR: 1.00 USER: ep2d_venc_ms_sbmb_SAT

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	2
Dist. factor	1500 %
Position	R6.7 P0.9 F43.3
Orientation	T > C-0.6
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	5920 ms
TE	38.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	SP2-4

Contrast

MTC	Off
Flip angle	25 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	820
Delay in TR	0 ms
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry

Multi-slice mode	Interleaved
Series	Ascending
Sat. region 1	
Thickness	50 mm
Position	R6.7 A76.8 F20.3
Orientation	C > T3.6
Sat. region 2	
Thickness	50 mm
Position	L0.0 P79.9 H1.6
Orientation	C > T-1.2
Special sat.	None

System

Body	Off
HEP	Off
HEA	Off
SP4	On
SP2	On
SP8	Off
SP6	Off
SP3	On
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	R6.7 P0.9 F43.3
Orientation	T > C-0.6
Rotation	0.00 deg
R >> L	200 mm
A >> P	200 mm
F >> H	85 mm

Physio

1st Signal/Mode	None

Angio

Flow mode	Single dir.
Encodings	1
Velocity enc.	16 cm/s
Direction	Through plane
Magnitude sum	Off

Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.94 ms
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast

RF spoiling	On
RF90 duration	5120
MB Number	2
DummyScan Number	5
FOV Shift Number	3
Shift K0 Center	1
Every Other Slice	1
SER Number	1
Venc Repetition	800
Spoil factor	5
Skew Direction	1
DualBand Sat	0
FOV Dir	0
Venc Type(0off,1+-,20+,3on,400++)	1

\\USER\AMRIT\Liyong2\df\ep_seg_fid33_venc60_centric

TA: 1:32 Voxel size: 1.4×1.4×4.0 mm Rel. SNR: 1.00 USER: ep_seg_fid_venc

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	1
Dist. factor	50 %
Position	L0.0 P10.0 H0.7
Orientation	T > C0.2
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	180 mm
FoV phase	100.0 %
Slice thickness	4.0 mm
TR	36 ms
TE	18 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	SP2-4

Contrast

MTC	Off
Flip angle	15 deg
Fat suppr.	None
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	512
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	None

System

Body	Off
HEP	Off
HEA	Off
SP4	On
SP2	On
SP8	Off
SP6	Off
SP3	On
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
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	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	L0.0 P10.0 H0.7
Orientation	T > C0.2
Rotation	0.00 deg
R >> L	180 mm
A >> P	180 mm
F >> H	4 mm

Physio

1st Signal/Mode	None
Segments	4
Resp. control	Off

Sequence

Introduction	Off
Dimension	2D
Bandwidth	1502 Hz/Px
Free echo spacing	Off
Echo spacing	0.87 ms
EPI factor	33
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
Flow Compensation	Off
Centric Reorder	On
Pat Ref Scan	On
VENC value	600
Undersampled	On

\\USER\AMRIT\Liyong2\df\ep2d_venc10_fast_TP_m3f3_EPI_deepbreath

TA: 1:20:54 PAT: 2 Voxel size: 1.5×1.5×5.0 mm Rel. SNR: 1.00 USER: ep2d_venc_ms_sbmb_SAT

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	3
Dist. factor	660 %
Position	L2.2 A10.7 H67.1
Orientation	T > C3.7
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	5920 ms
TE	38.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

Contrast

MTC	Off
Flip angle	25 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	820
Delay in TR	0 ms
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry

Multi-slice mode	Interleaved
Series	Ascending
Sat. region 1	
Thickness	50 mm
Position	L2.2 A89.3 H62.0
Orientation	C > T-3.7
Sat. region 2	
Thickness	50 mm
Position	L2.2 P66.0 H72.1
Orientation	C > T-3.7
Special sat.	None

System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	L2.2 A10.7 H67.1
Orientation	T > C3.7
Rotation	0.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	81 mm

Physio

1st Signal/Mode	None

Angio

Flow mode	Single dir.
Encodings	1
Velocity enc.	10 cm/s
Direction	Through plane
Magnitude sum	Off

Sequence

Introduction	Off
Bandwidth	1776 Hz/Px
Free echo spacing	Off
Echo spacing	0.94 ms
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast

RF spoiling	On
RF90 duration	5120
MB Number	3
DummyScan Number	5
FOV Shift Number	3
Shift K0 Center	1
Every Other Slice	1
SER Number	1
Venc Repetition	800
Spoil factor	5
Skew Direction	1
DualBand Sat	0
FOV Dir	0
Venc Type(0off,1+-,20+,3on,400++)	1

\\USER\AMRIT\Liyong2\df\ep2d_venc_ms_sbmb_SAT_flashrefNew

TA: 0.2 s PAT: Off Voxel size: 7.8×3.9×5.0 mm Rel. SNR: 1.00 USER: ep2d_venc_ms_sbmb_SAT_flashrefN

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	1
Dist. factor	200 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	500 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	62 ms
TE	1.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	20
Delay in TR	0 ms
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	50 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry

Multi-slice mode	Interleaved
Series	Ascending
Special sat.	None

System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	500 mm
A >> P	500 mm
F >> H	5 mm

Physio

1st Signal/Mode	None

Angio

Flow mode	Single dir.
Encodings	1
Velocity enc.	90 cm/s
Direction	Through plane
Magnitude sum	Off

Sequence

Introduction	Off
Bandwidth	752 Hz/Px
Free echo spacing	Off
Echo spacing	1.4 ms
EPI factor	64
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
RF90 duration	5120
MB Number	1
DummyScan Number	1
FOV Shift Number	1
Shift K0 Center	1
Every Other Slice	1
SER Number	1
Venc Repetition	1
Spoil factor	5

Skew Direction	0
DualBand Sat	0
FOV Dir	0
Venc Type(0off,1+-,20+,3on)	0

\\USER\AMRIT\Liyong2\df\ep2d_venc_ms_sbmb_SAT_flashref

TA: 0.2 s PAT: Off Voxel size: 7.8×3.9×5.0 mm Rel. SNR: 1.00 USER: ep2d_venc_ms_sbmb_SAT_flashref

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	1
Dist. factor	200 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	500 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	62 ms
TE	1.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC
Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	500 mm
A >> P	500 mm
F >> H	5 mm

Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	20
Delay in TR	0 ms
Multiple series	Off

Physio

1st Signal/Mode	None

Angio

Flow mode	Single dir.
Encodings	1
Velocity enc.	90 cm/s
Direction	Through plane
Magnitude sum	Off

Resolution

Base resolution	128
Phase resolution	50 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

Sequence

Introduction	Off
Bandwidth	752 Hz/Px
Free echo spacing	Off
Echo spacing	1.4 ms
EPI factor	64
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
RF90 duration	5120
MB Number	1
DummyScan Number	1
FOV Shift Number	1
Shift K0 Center	1
Every Other Slice	1
SER Number	1
Venc Repetition	1
Spoil factor	5

Geometry

Multi-slice mode	Interleaved
Series	Ascending
Special sat.	None

System

Skew Direction	0
DualBand Sat	0
FOV Dir	0
Venc Type(0off,1+-,20+,3on)	0

\\USER\AMRIT\Liyong2\df\fl_fq_mb_gre_3D_seg_m2f2

TA: 4:30 PAT: 2 Voxel size: 1.6×1.6×1.6 mm Rel. SNR: 1.00 USER: fl_fq_mb_gre_3D_seg

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	2
Dist. factor	100 %
Position	L0.0 A16.3 H33.9
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	12
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
TR	69.25 ms
TE	5.52 ms
Averages	1
Concatenations	2
Filter	None
Coil elements	HEA;HEP

Contrast

Flip angle	15 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Ref. lines 3D	12
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	None

System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	700 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	2
Phases	10

Angio

Flow mode	Single vel.
Encodings	3
Velocity enc.	90 cm/s
Direction 1	Through plane
Direction 2	A >> P
Direction 3	R >> L
Rephased images	On
Magnitude images	On
Magnitude sum	Off
Phase images	On

Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	260 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Fast*
RF spoiling	On
MB Number	2
FOV Shift	2

\\USER\AMRIT\Liyong2\df\ep2d_venc_ms_m3f3_SATNew

TA: 11:50 PAT: 2 Voxel size: 1.6×1.6×5.0 mm Rel. SNR: 1.00 USER: ep2d_venc_ms_sbmb_SATNew

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	3
Dist. factor	700 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	5920 ms
TE	38.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	120
Delay in TR	0 ms
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry

Multi-slice mode	Interleaved
Series	Ascending
Special sat.	None

System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	200 mm
A >> P	200 mm
F >> H	85 mm

Physio

1st Signal/Mode	None

Angio

Flow mode	Single dir.
Encodings	1
Velocity enc.	5 cm/s
Direction	Through plane
Magnitude sum	Off

Sequence

Introduction	Off
Bandwidth	1776 Hz/Px
Free echo spacing	Off
Echo spacing	0.92 ms
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
RF90 duration	5120
MB Number	3
DummyScan Number	5
FOV Shift Number	3
Shift K0 Center	1
Every Other Slice	1
SER Number	1
Venc Repetition	100
Spoil factor	5
Skew Direction	1
DualBand Sat	0
FOV Dir	0
Venc Type(0off,1+-,20+,3on,400++)	1

\\USER\AMRIT\Liyong2\df\fl_fq_mb_gre_3D_seg_m2f2

TA: 5:23 PAT: 2 Voxel size: 1.6×1.6×1.6 mm Rel. SNR: 1.00 USER: fl_fq_mb_gre_3D_seg

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	2
Dist. factor	100 %
Position	L2.4 A20.6 H35.1
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	12
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
TR	69.25 ms
TE	5.52 ms
Averages	1
Concatenations	2
Filter	None
Coil elements	HEA;HEP

Contrast

Flip angle	15 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Ref. lines 3D	12
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	None

System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	840 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	2
Phases	12

Angio

Flow mode	Single vel.
Encodings	3
Velocity enc.	90 cm/s
Direction 1	Through plane
Direction 2	A >> P
Direction 3	R >> L
Rephased images	On
Magnitude images	On
Magnitude sum	Off
Phase images	On
Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off

MIP-Time	Off
Save original images	On

Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	260 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Fast*
RF spoiling	On
MB Number	2
FOV Shift	2

\\USER\AMRIT\Liyong2\df\fl_fq_mb_gre_3D_seg_m2f2_bottom

TA: 5:23 PAT: 2 Voxel size: 1.6×1.6×1.6 mm Rel. SNR: 1.00 USER: fl_fq_mb_gre_3D_seg

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	2
Dist. factor	100 %
Position	L2.4 A20.6 H15.9
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	12
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
TR	69.25 ms
TE	5.52 ms
Averages	1
Concatenations	2
Filter	None
Coil elements	HEA;HEP

Contrast

Flip angle	15 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Ref. lines 3D	12
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	None

System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	840 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	2
Phases	12

Angio

Flow mode	Single vel.
Encodings	3
Velocity enc.	90 cm/s
Direction 1	Through plane
Direction 2	A >> P
Direction 3	R >> L
Rephased images	On
Magnitude images	On
Magnitude sum	Off
Phase images	On
Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off

MIP-Time	Off
Save original images	On

Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	260 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Fast*
RF spoiling	On
MB Number	2
FOV Shift	2

\\USER\AMRIT\Liyong2\df\fl_fq_mb_gre_3D_seg_m1f1_up_bt

TA: 5:24 PAT: 2 Voxel size: 1.6×1.6×1.6 mm Rel. SNR: 1.00 USER: fl_fq_mb_gre_3D_seg

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	100 %
Position	L2.4 A20.6 H15.9
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	12
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
TR	69.25 ms
TE	5.52 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

Contrast

Flip angle	15 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Ref. lines 3D	12
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	None

System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	840 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	2
Phases	12

Angio

Flow mode	Single vel.
Encodings	3
Velocity enc.	90 cm/s
Direction 1	Through plane
Direction 2	A >> P
Direction 3	R >> L
Rephased images	On
Magnitude images	On
Magnitude sum	Off
Phase images	On
Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off

MIP-Time	Off
Save original images	On

Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	260 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Fast*
RF spoiling	On
MB Number	1
FOV Shift	1