$\label{local_loc$

roperties		Hamming	Off
Prio Recon	Off	Geometry	
Before measurement		Multi-slice mode	Sequential
After measurement		Series	Ascending
Load to viewer	On		, 1000.1.ug
Inline movie	Off	Sat. region 1	
Auto store images	On	Thickness	3 mm
<u> </u>	Off	Position	L0.0 P0.0 H56.0
Load to stamp segments	Off	Orientation	Transversal
Load images to graphic	Oli	Special sat.	None
segments	0"		
Auto open inline display	Off	System	
Start measurement without	On	Body	Off
further preparation		HEP	On
Wait for user to start	Off		
Start measurements	single	HEA	On
		Positioning mode	REF
outine		Table position	H
Slice group 1		Table position	0 mm
Slices	1	MSMA	S - C - T
Dist. factor	50 %		8-6-1 R>>L
Position	L0.0 A16.9 F0.6	Sagittal	· · · · · =
Orientation	Transversal	Coronal	A >> P
Phase enc. dir.	A >> P	Transversal	F >> H
Rotation	0.00 deg	Save uncombined	Off
Phase oversampling	0 %	Coil Combine Mode	Sum of Squares
FoV read	200 mm	AutoAlign	
FoV phase	100.0 %	Auto Coil Select	Default
Slice thickness	3.0 mm		
	3.5 ms	Shim mode	Standard
TR		Adjust with body coil	Off
TE	17 ms	Confirm freq. adjustment	Off
Averages	1	Assume Silicone	Off
Concatenations	1	? Ref. amplitude 1H	0.000 V
Filter	None	Adjustment Tolerance	Auto
Coil elements	HEA;HEP	Adjust volume	
Contract		Position	L0.0 A16.9 F0.6
Contrast	0"	Orientation	Transversal
MTC	Off	Rotation	0.00 deg
Flip angle	20 deg	R >> L	200 mm
Fat suppr.	Fat sat.		
Avoraging mode	Long torm	A >> P	200 mm
Averaging mode	Long term	F >> H	3 mm
Reconstruction	Magnitude	Physio	
Measurements	10	1st Signal/Mode	None
Pause after meas. 1	0.0 s	Segments	4
Pause after meas. 2	0.0 s	·····	т
Pause after meas. 3	0.0 s	Resp. control	Off
Pause after meas. 4	0.0 s	'	
Pause after meas. 5	0.0 s	Sequence	
Pause after meas. 6	0.0 s	Introduction	Off
Pause after meas. 7	0.0 s	Dimension	2D
Pause after meas. 8	0.0 s	Bandwidth	1396 Hz/Px
Pause after meas. 9	0.0 s	Free echo spacing	Off
Multiple series	Each measurement	Echo spacing	0.84 ms
Maniple Selles	Laon measurement		
esolution		EPI factor	33
Base resolution	128	RF pulse type	Normal
Phase resolution	100 %	Gradient mode	Fast
Phase partial Fourier	Off	RF spoiling	On
Interpolation	Off		
	OII	Encodeding Off	Off
Matrix Coil Mode	Auto (CP)	Centric Reorder	On
		Pat Ref Scan	On
Distortion Corr.	Off	VENC value	100
Prescan Normalize	Off	Undersampled	Off
Raw filter	Off	•	
Elliptical filter	Off		

 $\verb|\USER\AMRIT\Liyong\20150727\ep2d_bold_OVS_flash_slide| \\$

USER: ep2d_bold_OVS_flash_slide

Voxel size: 2.5×2.5×2.0 mm Rel. SNR: 1.00

TA: 0:27

PAT: Off

Properties		Position	L0.0 A86.0 H0.0
Prio Recon	Off	Orientation	Coronal
Before measurement	Oll	Sat. region 2	
After measurement		Thickness	80 mm
	On	Position	L0.0 P64.2 H0.0
Load to viewer	On O#	Orientation	Coronal
Inline movie	Off	Special sat.	None
Auto store images	On Or	0	
Load to stamp segments	Off	System	
Load images to graphic	Off	Body	Off
segments		HEP	On
Auto open inline display	Off	HEA	On
Start measurement without	On	Desitioning mode	REF
further preparation		Positioning mode	
Wait for user to start	Off	Table position	Н
Start measurements	single	Table position	0 mm
	- 3 -	MSMA	S - C - T
Routine		Sagittal	R >> L
Slice group 1		Coronal	A >> P
Slices	50	Transversal	F >> H
Dist. factor	0 %	Coil Combine Mode	Sum of Squares
Position	L0.0 A7.3 F21.8	AutoAlign	
Orientation	Transversal	Auto Coil Select	Default
Phase enc. dir.	A >> P		
Rotation	0.00 deg	Shim mode	Standard
Phase oversampling	0.00 deg 0 %	Adjust with body coil	Off
FoV read	200 mm	Confirm freq. adjustment	Off
		Assume Silicone	Off
FoV phase	100.0 %	? Ref. amplitude 1H	0.000 V
Slice thickness	2.00 mm	Adjustment Tolerance	Auto
TR	3000 ms	Adjust volume	71010
TE	39 ms	Position	L0.0 A7.3 F21.8
Averages	1	Orientation	Transversal
Concatenations	1		
Filter	None	Rotation	0.00 deg
Coil elements	HEA;HEP	R >> L	200 mm
~		A >> P	200 mm
Contrast	~	F >> H	100 mm
MTC	Off	Physio	
Flip angle	90 deg	1st Signal/Mode	None
Fat suppr.	Fat sat.	1	110110
Averaging mode	Long term	BOLD	
Reconstruction	Magnitude	GLM Statistics	Off
Measurements	9	Dynamic t-maps	Off
Delay in TR	9 0 ms	Starting ignore meas	0
•		Ignore after transition	0
Multiple series	Off	Model transition states	On
Resolution		Temp. highpass filter	On
Base resolution	80	Threshold	4.00
Phase resolution	100 %	Paradigm size	20
Phase partial Fourier	6/8	Meas[1]	Baseline
Interpolation	Off		Baseline
interpolation	OII	Meas[2]	
PAT mode	None	Meas[3]	Baseline
Matrix Coil Mode	Auto (CP)	Meas[4]	Baseline
		Meas[5]	Baseline
Distortion Corr.	Off	Meas[6]	Baseline
Prescan Normalize	Off	Meas[7]	Baseline
Raw filter	On	Meas[8]	Baseline
Elliptical filter	Off	Meas[9]	Baseline
Hamming	Off	Meas[10]	Baseline
· ·		Meas[11]	Active
Geometry		Meas[12]	Active
300mony			
Multi-slice mode	Interleaved		Δctiva
,		Meas[13]	Active
Multi-slice mode Series	Interleaved Ascending	Meas[14]	Active
Multi-slice mode			

Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

Sequence

Coquento	
Introduction Asymmetric echo Bandwidth Free echo spacing Echo spacing	Off Off 754 Hz/Px Off 1.45 ms
EPI factor RF pulse type Gradient mode RF spoiling	80 Normal Fast On
RF90 duration MB Number DummyScan Number FOV Shift Number SkewType(1ff) OVS flash(1on) SER Number Spoil factor Skew Direction Sat RF90 duration Dual On(1) Echo Distance MB Measurements Ramp On	5120 3 2 3 0 1 1 5 0 5120 1 1.00 1 On

\\USER\AMRIT\Liyong\20150727\localizer

SIEMENS: gre

PAT: Off Voxel size: 1.1×1.0×7.0 mm Rel. SNR: 1.00

TA: 0:13

17.1. 0.1.0	7(1. 01)	TKGI. CIVIK. 1.00	
Properties		Phase resolution Phase partial Fourier	90 % Off
Prio Recon	Off	Interpolation	On
Before measurement			
After measurement		PAT mode	None
Load to viewer	On	Matrix Coil Mode	Auto (CP)
Inline movie	Off	Imaga Filtor	
Auto store images	On	Image Filter	Off
Load to stamp segments	Off	Distortion Corr.	Off
Load images to graphic	Off	Unfiltered images	Off
segments		Prescan Normalize	On
Auto open inline display	Off	Normalize	Off
Start measurement without	On	B1 filter	Off
further preparation	311	Raw filter	Off
Wait for user to start	Off	Elliptical filter	On
Start measurements	single	Mode	Inplane
Start measurements	Single	Coometry	
Routine		Geometry	Commental
Slice group 1		- Multi-slice mode	Sequential
Slices	1	Series	Interleaved
Dist. factor	20 %	Saturation mode	Standard
Position	Isocenter	Special sat.	None
Orientation	Sagittal		
Phase enc. dir.	A >> P	Tim CT mode	Off
Rotation	0.00 deg	Tim CT mode	OII
Slice group 2	5.00 409	System	
Slices	1	Body	Off
Dist. factor	20 %	HEP	On
Position	Isocenter	HEA	On
Orientation	Transversal		
Phase enc. dir.	A >> P	Positioning mode	REF
Rotation	0.00 deg	Table position	Н
	0.00 deg	Table position	0 mm
Slice group 3	4	MSMA	S - C - T
Slices	1	Sagittal	R >> L
Dist. factor	20 %	Coronal	A >> P
Position	Isocenter	Transversal	F >> H
Orientation	Coronal	Save uncombined	Off
Phase enc. dir.	R >> L	Coil Combine Mode	Adaptive Combine
Rotation	0.00 deg	AutoAlign	
Phase oversampling	0 %	Auto Coil Select	Default
FoV read	250 mm		
FoV phase	100.0 %	Shim mode	Tune up
Slice thickness	7.0 mm	Adjust with body coil	Off
TR	8.6 ms	Confirm freq. adjustment	Off
TE	4.00 ms	Assume Silicone	Off
Averages	2	? Ref. amplitude 1H	0.000 V
Concatenations	3	Adjustment Tolerance	Auto
Filter	Prescan Normalize, Elliptical	Adjust volume	
	filter	Position	Isocenter
Coil elements	HEA;HEP	Orientation	Transversal
_		Rotation	0.00 deg
Contrast	0	. R >> L	350 mm
TD	0 ms	A >> P	263 mm
MTC	Off	F >> H	350 mm
Magn. preparation	None	Dhyoio	
Flip angle	20 deg	Physio	Nega
Fat suppr.	None	1st Signal/Mode	None
Water suppr.	None	Segments	1
Averaging mode	Short term	Dark blood	Off
Reconstruction			
Measurements	Magnitude 1	Resp. control	Off
	<u>.</u> .	Inline	
Multiple series	Each measurement		Off
Resolution		Subtract	Off Off
Base resolution	256	Liver registration	Off Off
1		Std-Dev-Sag	Off

Std-Dev-Cor Std-Dev-Tra Std-Dev-Time MIP-Sag MIP-Cor MIP-Tra MIP-Time Save original images	Off
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
Excitation	Normal

\\USER\AMRIT\Liyong\20150727\ep_seg_fid_2venc_fast

TA: 2:20	Voxel size: 1.6×1.6×3.0 m	m Rel. SNR: 1.00 USER: ep	o_seg_fid_2venc
Properties		Orientation Special sat.	Transversal None
Prio Recon	Off		
Before measurement		System	
After measurement	_	Body	Off
Load to viewer	On	HEP	On
Inline movie	Off	HEA	On
Auto store images	On		OII
Load to stamp segments	Off	Positioning mode	REF
Load images to graphic	Off	Table position	Н
segments		Table position	0 mm
Auto open inline display	Off	MSMA	S-C-T
Start measurement without	On	Sagittal	R >> L
further preparation		Coronal	A >> P
Wait for user to start	Off	Transversal	F >> H
Start measurements	single	Save uncombined	Off
	3	Coil Combine Mode	Sum of Squares
Routine		— AutoAlign	
Slice group 1		Auto Coil Select	Default
Slices	1	······································	
Dist. factor	50 %	Shim mode	Standard
Position	L0.0 A18.5 F9.7	Adjust with body coil	Off
Orientation	Transversal	Confirm freq. adjustment	Off
Phase enc. dir.	A >> P	Assume Silicone	Off
Rotation	0.00 deg	? Ref. amplitude 1H	0.000 V
Phase oversampling	0 %	Adjustment Tolerance	Auto
FoV read	200 mm	Adjust volume	7 10.10
FoV phase	100.0 %	Position	L0.0 A18.5 F9.7
Slice thickness	3.0 mm	Orientation	Transversal
TR	35 ms	Rotation	0.00 deg
TE	17 ms	R >> L	200 mm
Averages	1	A >> P	200 mm
Concatenations	1	F >> H	3 mm
Filter	None	Г >> П	3 111111
Coil elements	HEA;HEP	Physio	
Con elements	IILA,IILI	1st Signal/Mode	None
Contrast		Segments	4
MTC	Off		
Flip angle	20 deg	Resp. control	Off
Fat suppr.	Fat sat.	Sequence	
		Introduction	Off
Averaging mode	Long term	Dimension	2D
Reconstruction	Magnitude	Bandwidth	1396 Hz/Px
Measurements	800	Free echo spacing	Off
Pause after meas.	0.0 s	Echo spacing	0.84 ms
Multiple series	Each measurement		
Resolution		EPI factor	33
Base resolution	128	RF pulse type	Normal
Phase resolution	100 %	Gradient mode	Fast
Phase partial Fourier	Off	RF spoiling	On
Interpolation	Off		
	OII	Encodeding Off	Off
Matrix Coil Mode	Auto (CP)	Centric Reorder	On
			On
Distortion Corr.	Off	VENC value	100
Prescan Normalize	Off	Undersampled	On
Raw filter	Off		
Elliptical filter	Off		
Hamming	Off		
Seometry			
Multi-slice mode	Sequential		
	Sequential		
Series	Ascending		
Sat. region 1			
Thickness	3 mm		
Position	L0.0 P0.0 H33.1		

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TA: 2:24	Voxel size: 1.4×1.4×4.0 mm	Rel. SNR: 1.00 USER: e	p_seg_fid_venc
Properties		Body	Off
Prio Recon	Off	_ HEP	On
Before measurement	Oli	HEA	On
After measurement		Positioning mode	FIX
Load to viewer	On	Table position	Н
Inline movie	Off	Table position	0 mm
Auto store images	On	MSMA	S - C - T
Load to stamp segments	Off	Sagittal	R >> L
Load images to graphic	Off	Coronal	A >> P
segments	Oil	Transversal	F >> H
Auto open inline display	Off	Save uncombined	Off
	On		
Start measurement without	On	Coil Combine Mode	Sum of Squares
further preparation	0#	AutoAlign	Dofoult
Wait for user to start	Off	Auto Coil Select	Default
Start measurements	single	Shim mode	Standard
Coutine		Adjust with body coil	Off
Slice group 1		Confirm freq. adjustment	Off
Slices	1	Assume Silicone	Off
Dist. factor	50 %	? Ref. amplitude 1H	0.000 V
Position	L0.0 A18.5 F9.7	Adjustment Tolerance	Auto
Orientation	Transversal	Adjust volume	rato
Phase enc. dir.	A >> P	Position	L0.0 A18.5 F9.7
Rotation	0.00 deg	Orientation	Transversal
Phase oversampling	0.00 deg 0 %	Rotation	0.00 deg
FoV read	180 mm	R >> L	180 mm
FoV phase	100.0 %	A >> P	180 mm
Slice thickness	4.0 mm	F>> H	4 mm
TR	36 ms		4 111111
TE	18 ms	Physio	
Averages	1	1st Signal/Mode	None
Concatenations	1	Segments	4
Filter	None	Deep control	O#
		Resp. control	Off
Coil elements	HEA;HEP	Sequence	
Contrast		Introduction	Off
MTC	Off	Dimension	2D
Flip angle	15 deg	Bandwidth	1502 Hz/Px
Fat suppr.	None	Free echo spacing	Off
		Echo spacing	0.87 ms
Averaging mode	Long term		
Reconstruction	Magnitude	EPI factor	33
Measurements	800	RF pulse type	Normal
Pause after meas.	0.0 s	Gradient mode	Fast
Multiple series	Off	RF spoiling	On
Resolution		Flow Compensation	Off
Base resolution	128	Centric Reorder	On
Phase resolution	100 %	Pat Ref Scan	On
Phase partial Fourier	Off	VENC value	1000
Interpolation	Off		
interpolation	OII	Undersampled	On
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

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TA: 2:24	Voxel size: 1.4×1.4×4.0 mm	Rel. SNR: 1.00 USER: e	p_seg_fid_venc
D (Body	Off
Properties		- HEP	On
Prio Recon	Off	HEA	On
Before measurement		Desiries and	FIV
After measurement	0.5	Positioning mode	FIX
Load to viewer	On Off	Table position	H
Inline movie	Off	Table position	0 mm
Auto store images	On O"	MSMA	S-C-T
Load to stamp segments	Off	Sagittal	R >> L
Load images to graphic	Off	Coronal	A >> P
segments	0"	Transversal	F >> H
Auto open inline display	Off	Save uncombined	Off
Start measurement without	On	Coil Combine Mode	Sum of Squares
further preparation	0"	AutoAlign	D-fIt
Wait for user to start	Off	Auto Coil Select	Default
Start measurements	single	Shim mode	Standard
Routine		Adjust with body coil	Off
Slice group 1		Confirm freq. adjustment	Off
Slices	1	Assume Silicone	Off
Dist. factor	50 %	? Ref. amplitude 1H	0.000 V
Position	L0.0 A18.5 H31.9	Adjustment Tolerance	Auto
Orientation	Transversal	Adjust volume	, 1010
Phase enc. dir.	A >> P	Position	L0.0 A18.5 H31.9
Rotation	0.00 deg	Orientation	Transversal
Phase oversampling	0.00 deg 0 %	Rotation	0.00 deg
FoV read	180 mm	R >> L	180 mm
FoV read FoV phase	100.0 %	A >> P	180 mm
Slice thickness	4.0 mm	F >> H	4 mm
TR	36 ms	Г >> П	4 111111
TE	18 ms	Physio	
	1	1st Signal/Mode	None
Averages	1 1	Segments	4
Concatenations	· · · · · · · · · · · · · · · · · · ·		
Filter	None	Resp. control	Off
Coil elements	HEA;HEP	Sequence	
Contrast		Introduction	Off
MTC	Off	Dimension	2D
Flip angle	15 deg	Bandwidth	1502 Hz/Px
Fat suppr.	None	Free echo spacing	Off
		Echo spacing	0.87 ms
Averaging mode	Long term		
Reconstruction	Magnitude	EPI factor	33
Measurements	800	RF pulse type	Normal
Pause after meas.	0.0 s	Gradient mode	Fast
Multiple series	Off	RF spoiling	On
Resolution		Flow Compensation	Off
Base resolution	128	Centric Reorder	On
Phase resolution	100 %	Pat Ref Scan	On
Phase partial Fourier	Off	VENC value	100
Interpolation	Off		
		Undersampled	On
Matrix Coil Mode	Auto (CP)		
Distortion Corr.	Off		
Prescan Normalize	Off		
Raw filter	Off		
Elliptical filter	Off		
Hamming	Off		
Geometry		-	
Geometry Multi-slice mode	Sequential	-	
Geometry		-	
Geometry Multi-slice mode	Sequential	-	

System

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Voxel size: 1.5×1.5×5.0 mm Rel. SNR: 1.00

PAT: 2

TA: 1:20:54

USER: ep2d_venc_ms_sbmb_SAT

Properties		Sat. region 1	
Prio Recon	Off	Thickness	50 mm
Before measurement		Position	L0.0 A89.6 H117.0
After measurement		Orientation	C > T-14.6
Load to viewer	On	Sat. region 2	
Inline movie	Off	Thickness	50 mm
Auto store images	On	Position	L0.0 P61.0 H156.2
Load to stamp segments	Off	Orientation	C > T-14.6
Load images to graphic	Off	Special sat.	None
segments		System	
Auto open inline display	Off	Body	Off
Start measurement without	On	HEP	On
further preparation		HEA	On
Wait for user to start	Off	ПЕА	On
Start measurements	single	Positioning mode	FIX
	G	Table position	Н
Routine		Table position	0 mm
Slice group 1		MSMA	S - C - T
Slices	3		
Dist. factor	350 %	Sagittal	R >> L
Position	L0.0 A20.7 H53.8	Coronal	A >> P
Orientation	Transversal	Transversal	F >> H
Phase enc. dir.	A >> P	Coil Combine Mode	Sum of Squares
Rotation	0.00 deg	AutoAlign	
Phase oversampling	0.00 deg 0 %	Auto Coil Select	Default
. •			
FoV read	192 mm	Shim mode	Standard
FoV phase	100.0 %	Adjust with body coil	Off
Slice thickness	5.0 mm	Confirm freq. adjustment	Off
TR	5920 ms	Assume Silicone	Off
TE	38.0 ms	? Ref. amplitude 1H	0.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	1	Adjust volume	
Filter	None	Position	L0.0 A20.7 H53.8
Coil elements	HEA;HEP	Orientation	Transversal
		Rotation	0.00 deg
Contrast		—— R >> L	192 mm
MTC	Off		
Flip angle	25 deg	A >> P	192 mm
Fat suppr.	Fat sat.	F >> H	50 mm
		····· Physio	
Averaging mode	Long term	1st Signal/Mode	None
Reconstruction	Magnitude	13t Signal/Mode	None
Measurements	820	Angio	
Delay in TR	0 ms	Flow mode	Single dir.
Multiple series	Off	Encodings	1
•		Velocity enc.	10 cm/s
Resolution		—— Direction	Through plane
Base resolution	128		Off
Phase resolution	100 %	Magnitude sum	Oli
Phase partial Fourier	6/8	Sequence	
Interpolation	Off	Introduction	Off
		Bandwidth	1776 Hz/Px
PAT mode	GRAPPA		Off
Accel. factor PE	2	Free echo spacing	_
Ref. lines PE	24	Echo spacing	0.94 ms
Matrix Coil Mode	Auto (Triple)	EPI factor	128
Reference scan mode	Separate	RF pulse type	Normal
		Gradient mode	
Distortion Corr.	Off		Fast
Prescan Normalize	Off	RF spoiling	On
Raw filter	Off	RF90 duration	5120
Elliptical filter	Off	MB Number	3
Hamming	Off	DummyScan Number	5
-	5		
Geometry		FOV Shift Number	3
Multi-slice mode	Interleaved	——— Shift K0 Center	1
Mulli-Slice Houe	IIICIICAVCU	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,	,4 1
00++)	

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PAT: 2

TA: 1:19:55

Voxel size: 1.4×1.4×4.0 mm Rel. SNR: 1.00 USER: ep2d_venc_ms_sbmb_SAT

Properties		Sat. region 1	
Prio Recon	Off	Thickness	50 mm
Before measurement	J.,	Position	R2.5 A84.8 F84.7
After measurement		Orientation	C > T-5.4 > S0.9
	On		C > 1-0.4 > 30.9
Load to viewer	On	Sat. region 2	
Inline movie	Off	Thickness	50 mm
Auto store images	On	Position	R1.9 P69.6 F64.1
Load to stamp segments	Off	Orientation	C > T-5.4 > S0.9
Load images to graphic	Off	Special sat.	None
segments		1 .	
Auto open inline display	Off	System	
		Body	Off
Start measurement without	On	HEP	On
further preparation	•	HEA	On
Wait for user to start	Off	11127	
Start measurements	single	Positioning mode	REF
	-	Table position	H
outine		Table position	0 mm
Slice group 1			-
Slices	1	MSMA	S - C - T
Dist. factor	1000 %	Sagittal	R >> L
Position	R0.7 A16.5 H29.0	Coronal	A >> P
		Transversal	F >> H
Orientation	S > C-0.9 > T-0.1	Coil Combine Mode	Sum of Squares
Phase enc. dir.	A >> P	AutoAlign	
Rotation	0.00 deg	Auto Coil Select	Default
Phase oversampling	0 %	Auto Coll Select	Delault
FoV read	180 mm	Shim mode	Standard
FoV phase	100.0 %		Off
Slice thickness		Adjust with body coil	_
	4.0 mm	Confirm freq. adjustment	Off
TR	5920 ms	Assume Silicone	Off
TE	38.0 ms	? Ref. amplitude 1H	0.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	1	Adjust volume	
Filter	None	Position	R0.7 A16.5 H29.0
Coil elements	HEA;HEP		
Con elements	HEA, HEP	Orientation	S > C-0.9 > T-0.1
ontrast		Rotation	0.00 deg
MTC	Off	—— F >> H	180 mm
		A >> P	180 mm
Flip angle	25 deg	R >> L	4 mm
Fat suppr.	Fat sat.		
Avaraging	Long torm	Physio	
Averaging mode	Long term	1st Signal/Mode	None
Reconstruction	Magnitude	. S. Signa, Wood	7,0110
Measurements	820	Angio	
Delay in TR	0 ms	Flow mode	Single dir.
Multiple series	Off	Encodings	1
anpio dellos	3 11		•
esolution		Velocity enc.	10 cm/s
Base resolution	128	—— Direction	F >> H
Phase resolution	100 %	Magnitude sum	Off
		Commercia	
Phase partial Fourier	6/8	Sequence	
Interpolation	Off	Introduction	Off
DAT mode	CD A DD A	Bandwidth	1628 Hz/Px
PAT mode	GRAPPA	Free echo spacing	Off
Accel. factor PE	2	Echo spacing	0.96 ms
Ref. lines PE	24	Lono spacing	
Matrix Coil Mode	Auto (Triple)	EPI factor	128
Reference scan mode	Separate	RF pulse type	Normal
Distortion Corr.	Off	Gradient mode	Fast
Prescan Normalize	Off	RF spoiling	On
Raw filter	Off	DECO duration	5120
		RF90 duration	5120
Elliptical filter	Off	MB Number	1
Hamming	Off	DummyScan Number	5
eometry		FOV Shift Number	1
eometry		Shift K0 Center	1
Multi-slice mode	Interleaved	Every Other Slice	1
Series	Ascending	L voly Ouler Olle	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,4	1
00++)	

\\USER\AMRIT\Liyong\20150727\localizer

TA: 0:13 PAT: Off Voxel size: 1.1×1.0×7.0 mm Rel. SNR: 1.00 SIEMENS: gre				
Droportion		Phase resolution	90 %	
Properties	0"	Phase partial Fourier	Off	
Prio Recon Before measurement	Off	Interpolation	On	
After measurement		PAT mode	None	
Load to viewer	On	Matrix Coil Mode	Auto (CP)	
Inline movie	Off		Adio (Ci)	
Auto store images	On	Image Filter	Off	
Load to stamp segments	Off	Distortion Corr.	Off	
Load images to graphic	Off	Unfiltered images	Off	
segments		Prescan Normalize	On	
Auto open inline display	Off	Normalize	Off	
Start measurement without	On	B1 filter	Off	
further preparation		Raw filter	Off	
Wait for user to start	Off	Elliptical filter	On	
Start measurements	single	Mode	Inplane	
Routine		Geometry		
		- Multi-slice mode	Sequential	
Slice group 1 Slices	1	Series	Interleaved	
Dist. factor	20 %	Saturation mode	Standard	
Position	Isocenter	Special sat.	None	
Orientation	Sagittal			
Phase enc. dir.	A >> P	Tim CT mode		
Rotation	0.00 deg	Tim C1 mode	Off	
Slice group 2	0.00 dog	System		
Slices	1	Body	Off	
Dist. factor	20 %	HEP	On	
Position	Isocenter	HEA	On	
Orientation	Transversal	Positioning mode	REF	
Phase enc. dir.	A >> P	Table position	H	
Rotation	0.00 deg	Table position	0 mm	
Slice group 3	-	MSMA	S - C - T	
Slices	1	Sagittal	R >> L	
Dist. factor	20 %	Coronal	A >> P	
Position	Isocenter	Transversal	F >> H	
Orientation	Coronal	Save uncombined	Off	
Phase enc. dir.	R >> L	Coil Combine Mode	Adaptive Combine	
Rotation	0.00 deg	AutoAlign	[']	
Phase oversampling	0 %	Auto Coil Select	Default	
FoV read	250 mm	Ohim made	T	
FoV phase	100.0 %	Shim mode Adjust with body coil	Tune up Off	
Slice thickness	7.0 mm	Confirm freq. adjustment	Off	
TR	8.6 ms	Assume Silicone	Off	
TE	4.00 ms	? Ref. amplitude 1H	0.000 V	
Averages Concatenations	2 3	Adjustment Tolerance	Auto	
Filter	Prescan Normalize, Elliptical	Adjust volume	Adio	
i litei	filter	Position	Isocenter	
Coil elements	HEA;HEP	Orientation	Transversal	
ı		Rotation	0.00 deg	
Contrast		R >> L	350 mm	
TD	0 ms	A >> P	263 mm	
MTC	Off	F >> H	350 mm	
Magn. preparation	None	Dhysis		
Flip angle	20 deg	Physio	None	
Fat suppr.	None	1st Signal/Mode Segments	None 1	
Water suppr.	None	Jeginenis	I	
Averaging mode	Short term	Dark blood	Off	
Reconstruction	Magnitude	Resp. control	Off	
Measurements	1	· ·	Oil	
Multiple series	Each measurement	Inline		
Resolution		Subtract	Off	
Base resolution	256	Liver registration	Off	
Dasc resolution	200	Std-Dev-Sag	Off	

Std-Dev-Cor Std-Dev-Tra Std-Dev-Time MIP-Sag MIP-Cor MIP-Tra MIP-Time Save original images	Off
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
1 5	

\\USER\AMRIT\Liyong\20150727\t2_haste_sag_p2

Voxel size: 1.0×1.0×2.0 mm Rel. SNR: 1.00

SIEMENS: haste

PAT: 2

TA: 0:17

Properties		Elliptical filter Mode	On Inplane
Prio Recon	Off	— Mode	пране
Before measurement		Geometry	
After measurement		Multi-slice mode	Single shot
Load to viewer	On	Series	Interleaved
Inline movie	Off		N I
Auto store images	On	Special sat.	None
Load to stamp segments	Off		
Load images to graphic	Off	Tim CT mode	Off
segments		System	
Auto open inline display	Off	Body	Off
Start measurement without	On	HEP	On
further preparation	.	HEA	On
Wait for user to start	Off	HEA	On
Start measurements	single	Positioning mode	FIX
Otart measurements	Single	Table position	Н
Routine		Table position	0 mm
Slice group 1		MSMA	S - C - T
Slices	40	Sagittal	R >> L
Dist. factor	0 %	Coronal	A >> P
Position	L2.5 A16.1 H42.7	Transversal	F >> H
Orientation	Sagittal	Save uncombined	Off
Phase enc. dir.	A >> P	Coil Combine Mode	Adaptive Combine
Rotation	0.00 deg	AutoAlign	
Phase oversampling	0 %		
FoV read	192 mm	Auto Coil Select	Default
FoV phase	100.0 %	Shim mode	Tune up
Slice thickness	2.0 mm	Adjust with body coil	Off
TR	395 ms	Confirm freq. adjustment	Off
		Assume Silicone	Off
TE	76 ms	? Ref. amplitude 1H	0.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	1	Adjust volume	Auto
Filter	Normalize, Elliptical filter	Position	Isocenter
Coil elements	HEA;HEP		
Contrast		Orientation	Transversal
MTC	Off	Rotation R >> L	0.00 deg 350 mm
Magn. preparation	None	A >> P	263 mm
Flip angle	110 deg		
Fat suppr.	None	F >> H	350 mm
Water suppr.	None	Physio	
Restore magn.	Off	1st Signal/Mode	None
			O#
Averaging mode	Long term	Dark blood	Off
Reconstruction	Magnitude	Resp. control	Off
Measurements	1	1	
Multiple series	Each measurement	Inline	
Resolution		Subtract	Off
Base resolution	192	Std-Dev-Sag	Off
Phase resolution	100 %	Std-Dev-Cor	Off
Phase resolution Phase partial Fourier	5/8	Std-Dev-Tra	Off
	Off	Std-Dev-Time	Off
Interpolation		MIP-Sag	Off
PAT mode	GRAPPA	MIP-Cor	Off
Accel. factor PE	2	MIP-Tra	Off
Ref. lines PE	24	MIP-Time	Off
Matrix Coil Mode	Auto (Triple)	Save original images	On
Reference scan mode	Integrated		
		Sequence	0.5
Image Filter	Off	Introduction	On
Distortion Corr.	Off	Dimension	2D
Prescan Normalize	Off	Contrasts	1
Normalize	On	Bandwidth	592 Hz/Px
B1 filter	Off	Flow comp.	No
2 :		Allowed delay	30 s

Echo spacing	5.82 ms	
Turbo factor	192	
RF pulse type	Fast	
Gradient mode	Fast	

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USER: ep2d_venc_ms_sbmb_SAT

Voxel size: 1.4×1.4×4.0 mm Rel. SNR: 1.00

PAT: 2

TA: 1:19:55

roperties		Sat. region 1	
Prio Recon	Off	Thickness	50 mm
Before measurement	.	Position	R0.1 A83.1 F66.1
After measurement		Orientation	C > T-5.4 > S0.9
	•		C > 1-5.4 > 50.9
Load to viewer	On	Sat. region 2	
Inline movie	Off	Thickness	50 mm
Auto store images	On	Position	L0.5 P71.3 F45.5
Load to stamp segments	Off	Orientation	C > T-5.4 > S0.9
Load images to graphic	Off	Special sat.	None
segments	O.I.	Opoolal cat.	140110
	0"	System	
Auto open inline display	Off	Body	Off
Start measurement without	On	HEP	On
further preparation			
Wait for user to start	Off	HEA	On
Start measurements	single	Positioning mode	REF
Gtart modearomonto	onigio		
outine		Table position	H
Slice group 1		Table position	0 mm
Slices	1	MSMA	S-C-T
		Sagittal	R >> L
Dist. factor	1000 %	Coronal	A >> P
Position	L1.7 A14.8 H47.6	Transversal	F >> H
Orientation	S > C-0.9 > T-0.1		
Phase enc. dir.	A >> P	Coil Combine Mode	Sum of Squares
Rotation	0.00 deg	AutoAlign	
Phase oversampling	0.00 deg 0 %	Auto Coil Select	Default
FoV read	180 mm	Shim mode	Standard
FoV phase	100.0 %	Adjust with body coil	Off
Slice thickness	4.0 mm	Confirm freq. adjustment	Off
TR	5920 ms	Assume Silicone	Off
TE	38.0 ms		0.000 V
		? Ref. amplitude 1H	
Averages	1	Adjustment Tolerance	Auto
Concatenations	1	Adjust volume	
Filter	None	Position	L1.7 A14.8 H47.6
Coil elements	HEA;HEP	Orientation	S > C-0.9 > T-0.1
	,	Rotation	0.00 deg
ontrast		—— F>> H	180 mm
MTC	Off		
Flip angle	25 deg	A >> P	180 mm
Fat suppr.	Fat sat.	R >> L	4 mm
ι αι συρρι. 	i at sat.	Discoria	
Averaging mode	Long term	Physio Physio	
Reconstruction	Magnitude	1st Signal/Mode	None
	820	Angia	
Measurements		Angio	
Delay in TR	0 ms	Flow mode	Single dir.
Multiple series	Off	Encodings	1
application		Velocity enc.	10 cm/s
esolution		—— Direction	F >> H
Base resolution	128		Off
Phase resolution	100 %	Magnitude sum	Oii
Phase partial Fourier	6/8	Sequence	
Interpolation	Off	Introduction	Off
	OII		Off
PAT mode	GRAPPA	Bandwidth	1628 Hz/Px
Accel. factor PE	2	Free echo spacing	Off
		Echo spacing	0.96 ms
Ref. lines PE	24		
Matrix Coil Mode	Auto (Triple)	EPI factor	128
Reference scan mode	Separate	RF pulse type	Normal
		Gradient mode	Fast
Distortion Corr.	Off	RF spoiling	On
Prescan Normalize	Off	1X1 Spoiling	OII
Raw filter	Off	RF90 duration	5120
Elliptical filter	Off	MB Number	1
Hamming	Off		
Hamming	Oil	DummyScan Number	5
		FOV Shift Number	1
eometry			•
eometry Multi-slice mode	Interleaved	Shift K0 Center	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,4	l 1
00++)	

\\USER\AMRIT\Liyong\20150727\t2_haste_tra_p2 2 Voxel size: 1.0×1.0×4.0 mm Rel. SNR: 1.00

SIEMENS: haste

TA: 0:17

PAT: 2

		Elliptical filter	02
Properties		Elliptical filter Mode	On Inplane
Prio Recon	Off	1	прапе
Before measurement		Geometry	
After measurement	-	Multi-slice mode	Single shot
Load to viewer	On	Series	Interleaved
Inline movie	Off	Special sat.	None
Auto store images	On		
Load to stamp segments	Off	Tim CT mode	Off
Load images to graphic	Off	1	
segments	Off	System	
Auto open inline display Start measurement without	On	Body	Off
further preparation	On	HEP	On
Wait for user to start	Off	HEA	On
Start measurements	single	Positioning mode	FIX
	Siligio	Table position	Н
Routine		Table position	0 mm
Slice group 1		MSMA	S - C - T
Slices	40	Sagittal	R >> L
Dist. factor	0 %	Coronal	A >> P
Position	L0.0 A13.4 H55.6	Transversal	F >> H
Orientation	Transversal	Save uncombined	Off
Phase enc. dir.	A >> P	Coil Combine Mode	Adaptive Combine
Rotation	0.00 deg 0 %	AutoAlign	
Phase oversampling FoV read	0 % 192 mm	Auto Coil Select	Default
FoV phase	100.0 %	Shim mode	Tune up
Slice thickness	4.0 mm	Adjust with body coil	Off
TR	395 ms	Confirm freq. adjustment	Off
TE	76 ms	Assume Silicone	Off
Averages	1	? Ref. amplitude 1H	0.000 V
Concatenations	1	Adjustment Tolerance	Auto
Filter	Normalize, Elliptical filter	Adjust volume	
Coil elements	HEA;HEP	Position	Isocenter
	,	Orientation	Transversal
Contrast	0"	Rotation	0.00 deg
MTC	Off	R >> L	350 mm
Magn. preparation	None	A >> P	263 mm
Flip angle	117 deg None	F >> H	350 mm
Fat suppr. Water suppr.	None	Physio	
Restore magn.	Off	1st Signal/Mode	None
			O#
Averaging mode	Long term	Dark blood	Off
Reconstruction	Magnitude	Resp. control	Off
Measurements	1	Inline	
Multiple series	Each measurement		0#
Resolution		Subtract Std-Dev-Sag	Off Off
Base resolution	192	Std-Dev-Sag	Off
Phase resolution	100 %	Std-Dev-Tra	Off
Phase partial Fourier	5/8	Std-Dev-Time	Off
Interpolation	Off	MIP-Sag	Off
DAT	CDADDA	MIP-Cor	Off
PAT mode	GRAPPA	MIP-Tra	Off
Accel. factor PE Ref. lines PE	2 24	MIP-Time	Off
Matrix Coil Mode	Auto (Triple)	Save original images	On
Reference scan mode	Integrated	1	
I VOIDIDINO SUAII IIIUUD		Sequence	
	Off	Introduction	On
Image Filter			
Distortion Corr.	Off	Dimension	2D
Distortion Corr. Prescan Normalize	Off Off	Contrasts	1
Distortion Corr. Prescan Normalize Normalize	Off Off On	Contrasts Bandwidth	1 592 Hz/Px
Distortion Corr. Prescan Normalize	Off Off	Contrasts	1

Echo spacing	4.78 ms
Turbo factor	192
RF pulse type	Fast
Gradient mode	Fast

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USER: ep2d_venc_ms_sbmb_SAT

Voxel size: 1.4×1.4×4.0 mm Rel. SNR: 1.00

TA: 1:20:54

PAT: 2

		,	
Properties		Sat. region 1	
Prio Recon	Off	Thickness	50 mm
Before measurement	0.11	Position	R0.1 A87.8 F36.4
After measurement		Orientation	C > T-5.4 > S0.9
	0		C > 1-5.4 > 50.9
Load to viewer	On	Sat. region 2	
Inline movie	Off	Thickness	50 mm
Auto store images	On	Position	L0.5 P66.7 F15.8
Load to stamp segments	Off	Orientation	C > T-5.4 > S0.9
Load images to graphic	Off	Special sat.	None
segments		op ooia. oa	. 16116
Auto open inline display	Off	System	
		Body	Off
Start measurement without	On	HEP	On
further preparation		HEA	On
Wait for user to start	Off	ПСА	OII
Start measurements	single	Positioning mode	REF
	Jg. J	Table position	H
Routine			
Slice group 1		Table position	0 mm
Slices	3	MSMA	S - C - T
Dist. factor	600 %	Sagittal	R >> L
		Coronal	A >> P
Position	L1.7 A19.4 H77.3	Transversal	F >> H
Orientation	Transversal	Coil Combine Mode	
Phase enc. dir.	A >> P		Sum of Squares
Rotation	0.00 deg	AutoAlign	
Phase oversampling	0 %	Auto Coil Select	Default
FoV read	180 mm	China mada	Otton doud
		Shim mode	Standard
FoV phase	100.0 %	Adjust with body coil	Off
Slice thickness	4.0 mm	Confirm freq. adjustment	Off
TR	5920 ms	Assume Silicone	Off
TE	38.0 ms	? Ref. amplitude 1H	0.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	1		Auto
	=	Adjust volume	
Filter	None	Position	L1.7 A19.4 H77.3
Coil elements	HEA;HEP	Orientation	Transversal
Contrast		Rotation	0.00 deg
	0"		180 mm
MTC	Off	A >> P	180 mm
Flip angle	25 deg	F >> H	60 mm
Fat suppr.	Fat sat.		00 111111
		····· Physio	
Averaging mode	Long term	1st Signal/Mode	None
Reconstruction	Magnitude	13t Signal/Mode	None
Measurements	820	Angio	
Delay in TR	0 ms	Flow mode	Single dir.
Multiple series	Off	Encodings	1
Maniple series	Oll		-
Resolution		Velocity enc.	10 cm/s
Base resolution	128	—— Direction	R >> L
Phase resolution	100 %	Magnitude sum	Off
		0	
Phase partial Fourier	6/8	Sequence	
Interpolation	Off	Introduction	Off
DAT	CDADDA	Bandwidth	1628 Hz/Px
PAT mode	GRAPPA	Free echo spacing	Off
Accel. factor PE	2	Echo spacing	0.96 ms
Ref. lines PE	24	Lono spacing	
Matrix Coil Mode	Auto (Triple)	EPI factor	128
Reference scan mode	Separate	RF pulse type	Normal
	~ - In		
Distortion Corr.	Off	Gradient mode	Fast
Prescan Normalize	Off	RF spoiling	On
Raw filter	Off	RF90 duration	5120
	Off		
Elliptical filter		MB Number	3
Hamming	Off	DummyScan Number	5
Geometry		FOV Shift Number	3
_	Into via a d	Shift K0 Center	1
Multi-slice mode	Interleaved Ascending	Every Other Slice	1
Series			

1
800
5
1
0
0
1

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TA: 2:24	Voxel size: 1.4×1.4×4.0 mm	Rel. SNR: 1.00 USER: ep	o_seg_fid_venc
Properties		Body	Off
Prio Recon	Off	- HEP	On
Before measurement	Oli	HEA	On
		Positioning mode	FIX
After measurement	00		H
Load to viewer	On Off	Table position	
Inline movie	Off	Table position	0 mm
Auto store images	On	MSMA	S-C-T
Load to stamp segments	Off	Sagittal	R >> L
Load images to graphic	Off	Coronal	A >> P
segments		Transversal	F >> H
Auto open inline display	Off	Save uncombined	Off
Start measurement without	On	Coil Combine Mode	Sum of Squares
further preparation		AutoAlign	
Wait for user to start	Off	Auto Coil Select	Default
Start measurements	single	Chim mode	Standard
Douting		Shim mode	
Routine		Adjust with body coil	Off
Slice group 1		Confirm freq. adjustment	Off
Slices	1	Assume Silicone	Off
Dist. factor	50 %	? Ref. amplitude 1H	0.000 V
Position	L1.7 A19.4 H77.3	Adjustment Tolerance	Auto
Orientation	Transversal	Adjust volume	
Phase enc. dir.	A >> P	Position	L1.7 A19.4 H77.3
Rotation	0.00 deg	Orientation	Transversal
Phase oversampling	0 %	Rotation	0.00 deg
FoV read	180 mm	R >> L	180 mm
FoV phase	100.0 %	A >> P	180 mm
Slice thickness	4.0 mm	F >> H	4 mm
TR	36 ms	ļ	
TE	18 ms	Physio	
Averages	1	1st Signal/Mode	None
	1	Segments	4
Concatenations	I Nana		~"
Filter	None	Resp. control	Off
Coil elements	HEA;HEP	Sequence	
Contrast		Introduction	Off
MTC	Off	Dimension	2D
Flip angle	15 deg	Bandwidth	1502 Hz/Px
Fat suppr.	None	Free echo spacing	Off
· at suppr.			0.87 ms
Averaging mode	Long term	Echo spacing	0.07 1115
Reconstruction	Magnitude	EPI factor	33
Measurements	800	RF pulse type	Normal
Pause after meas.	0.0 s	Gradient mode	Fast
Multiple series	Off	RF spoiling	On
•	.		
Resolution		Flow Compensation	Off
Base resolution	128	Centric Reorder	On
Phase resolution	100 %	Pat Ref Scan	On
Phase partial Fourier	Off	VENC value	100
Interpolation	Off	Undersampled	On
Matrix Coil Mode	Auto (CP)		
Distortion Corr			
Distortion Corr.	Off		
Prescan Normalize	Off		
Raw filter	Off		
Elliptical filter	Off		
Elliptical filter Hamming	Off Off		
Hamming Geometry	Off	_	
Hamming Geometry Multi-slice mode	Off Sequential	-	
Hamming Geometry	Off	-	
Hamming Geometry Multi-slice mode	Off Sequential	-	

System

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TA: 2:24	Voxel size: 1.4×1.4×4.0 mm	Rel. SNR: 1.00 USER: e	p_seg_fid_venc
Properties		Body	Off
Prio Recon	Off	_ HEP	On
Before measurement	Oli	HEA	On
After measurement		Positioning mode	FIX
Load to viewer	On	Table position	Н
Inline movie	Off	Table position	0 mm
Auto store images	On	MSMA	S - C - T
Load to stamp segments	Off	Sagittal	R >> L
Load images to graphic	Off	Coronal	A >> P
segments	011	Transversal	F >> H
Auto open inline display	Off	Save uncombined	Off
Start measurement without	On	Coil Combine Mode	Sum of Squares
further preparation	011	AutoAlign	
Wait for user to start	Off	Auto Coil Select	Default
Start measurements	single		
Start measurements	Siligie	Shim mode	Standard
Coutine		Adjust with body coil	Off
Slice group 1		Confirm freq. adjustment	Off
Slices	1	Assume Silicone	Off
Dist. factor	50 %	? Ref. amplitude 1H	0.000 V
Position	L0.0 A18.5 H1.0	Adjustment Tolerance	Auto
Orientation	Transversal	Adjust volume	
Phase enc. dir.	A >> P	Position	L0.0 A18.5 H1.0
Rotation	0.00 deg	Orientation	Transversal
Phase oversampling	0 %	Rotation	0.00 deg
FoV read	180 mm	R >> L	180 mm
FoV phase	100.0 %	A >> P	180 mm
Slice thickness	4.0 mm	F >> H	4 mm
TR	36 ms	I .	
TE	18 ms	Physio	
Averages	1	1st Signal/Mode	None
Concatenations	1	Segments	4
Filter	None	Resp. control	Off
Coil elements	HEA;HEP	· ·	Oli
		Sequence	
Contrast		_ Introduction	Off
MTC	Off	Dimension	2D
Flip angle	15 deg	Bandwidth	1502 Hz/Px
Fat suppr.	None	Free echo spacing	Off
Averaging mode	Long term	Echo spacing	0.87 ms
Reconstruction	Magnitude	EPI factor	33
Measurements	800	RF pulse type	Normal
Pause after meas.	0.0 s		
Multiple series	Off	Gradient mode	Fast
Multiple SelleS	Oli	RF spoiling	On
Resolution		Flow Compensation	Off
Base resolution	128	Centric Reorder	On
Phase resolution	100 %	Pat Ref Scan	On
Phase partial Fourier	Off	VENC value	1000
Interpolation	Off	Undersampled	On
Matrix Coil Mode	Auto (CP)	1	
Distortion Corr.	Off		
Prescan Normalize	Off		
Raw filter	Off		
Elliptical filter	Off		
Hamming	Off		
Geometry			
Multi-slice mode	Sequential	_	
Series	Ascending		
On a sigl and			
Special sat.	None		

System

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SIEMENS: gre

PAT: Off Voxel size: 1.1×1.0×7.0 mm Rel. SNR: 1.00

TA: 0:13

Properties		7(1. 01)	TKGI. CIVIK. 1.00	
Prior Record Prio	•	-		
Before measurement After measurement Load to viewer On Inline movine On On Inline movine On On On On On On On		Off		-
Load to viewer On	Before measurement			
Inline movie	After measurement		PAT mode	None
Inline move	Load to viewer	On	Matrix Coil Mode	Auto (CP)
Auto store images	Inline movie	Off		
Load to stamp segments	Auto store images			_
Load images to graphic segments Auto open inlined display Start measurement without further preparation Wait for user to start Start measurements Single Steep to start Start measurements Stice group 1 Stice group 1 Stice group 2 Store Start start				_
Segments			Unfiltered images	Off
Auto open inline display Off Start measurement without further preparation Off Start measurements Single Start measurements Start measurements Single Start measurements Start measurements Start measurements Start measurements Start measurements Start measurements Start measurement Off Start measurement Star		Oll	Prescan Normalize	On
Start measurement without Off Unit properation Wait for user to start Off Start measurements Single Start measurements Off Start measurement Off O		0#	Normalize	Off
Start measurement without further proparation Wait for user to start Off			B1 filter	Off
Turner preparation Wait for user to start Siar measurements Single Silog group 1		Off	Raw filter	
Water of User to Start Start Teasurements Start measurements Single Start measurements Single Start measurements Silice group 1 Silices 1 Silices Series Interleaved Series Interleaved Series Interleaved Series Series Interleaved Series Series Interleaved Series Series Series Interleaved Series Ser				
State Court Cour				
Multi-silice mode Sequential Series Interleaved Series I	Start measurements	single	Wode	inplane
Multi-slice mode Sequential Series Interleaved	Poutine		Geometry	
Silices 1			Multi-slice mode	Seguential
Dist. factor		4		•
Position Sogittal Special sat. None				
Orientation Sagittal Phase enc. dir. A >> P Rotation 0.00 deg Silce group 2 System Silce group 2 System Silce group 3 Body Off Position Isocenter HEP On Orientation Transversal Positioning mode REF Phase enc. dir. A >> P Table position H Rotation 0.00 deg Table position H Slice group 3 1 Sagittal R > L Slice group 3 1 Sagittal position H Slice group 3 1 Sagittal position H Slice group 3 1 Sagittal position R > L Orientation Coronal A > P Position Isocenter Transversal F > H Position A > P Transversal F > H Position A > P Sagve uncombined Adjust view body Off Rotation 0.00 deg AutoAlign <td< td=""><td></td><td></td><td></td><td></td></td<>				
Phase enc. dir. A >> P			Special sat.	
Phase enc. dir. A >> P Tim CT mode Off	Orientation	Sagittal		
Rotation	Phase enc. dir.			
Silice group 2 Silices 1 Body Off Position Isocenter Orientation Transversal Phase enc. dir. A >> P Rotation O.00 deg Table position Omm Silices 1 Sagittal R >> L Coronal A >> P Position Isocenter Table position Omm MSMA S - C - T Sagittal R >> L Coronal A >> P Table position Omm MSMA S - C - T Sagittal R >> L Coronal A >> P Transversal F >> H Coronal A >> P Transversal F >> H Coronal Adaptive Combine Coronal Adaptive Combine Coll Combine Mode Adaptive Combine Auto Coil Select Default TR 8.6 ms TE 4.00 ms Adjust with body coil Off Assume Silicone Off Assume Silicone Off Assume Silicone Off Adjust with Tolerance Auto Adjust with Degree Application To Oms Off Assume Silicone Transversal Coil elements HEA;HEP On Doms A >> P 263 mm To Off A >> P 263 mm F >> H 350 mm A >> P 263 mm F >> H 350 mm A >> P 263 mm F >> H 350 mm A >> P 263 mm Averaging mode Short term Bagitude None Resolution Magnitude Magnitude Measurements 1 Multiple series Each measurement Resolution Off Resp. control Off Resolution Off Control Resolution Off C		0.00 deg	ļ	5
Silices		<u> </u>	System	
Dist. factor		1	Body	Off
Position				On
Non-Harding Phase enc. dir. A >> P Table position H Table position Transversal F > H Table position Transversal F > H Table position Transversal F > H Table position Transversal Transve				On
Phase enc. dir.				
Rotation			Positioning mode	REF
Slice group 3			Table position	Н
Silice group 3		0.00 deg	Table position	0 mm
Sices 1				S-C-T
Dist. factor	Slices	1		R >> L
Position	Dist. factor	20 %		
Orientation Coronal Save uncombined Off Phase enc. dir. R >> L Coil Combine Mode Adaptive Combine Phase oversampling 0 % AutoAlign	Position	Isocenter		
Phase enc. dir. R >> L Coil Combine Mode Adaptive Combine Rotation 0.00 deg AutoAlign	Orientation	Coronal		
Rotation	Phase enc. dir			
Phase oversampling		—		
FoV read		•		
FoV phase			Auto Coil Select	Default
Slice thickness 7.0 mm Adjust with body coil Off			Shim mode	Tuno un
TR 8.6 ms Confirm freq. adjustment Off TE 4.00 ms Assume Silicone Off Averages 2 ? Ref. amplitude 1H 0.000 V Concatenations 3 Adjustment Tolerance Auto Filter Prescan Normalize, Elliptical filter Position Isocenter Coil elements HEA;HEP Orientation Transversal Rotation 0.00 deg Rotation 0.00 deg R >> L 350 mm A >> P 263 mm Magn. preparation None F >> H 350 mm Filip angle 20 deg Physio Physio Fat suppr. None Segments 1 Averaging mode Short term Dark blood Off Resp. control Off Resp. control Off Resp. control Off Liver registration Off				
TE				
Averages 2 Concatenations 3 Filter Prescan Normalize, Elliptical filter Position Isocenter Coil elements HEA;HEP Orientation Transversal Rotation 0.00 deg R >> L 350 mm A >> P 263 mm F >> H 350 mm A >> P 263 mm F >> H 350 mm A >> P 263 mm F >> H 350 mm A >> P 263 mm F >> H 350 mm A >> P 263 mm F >> H 350 mm A >> P 360 mm A >> P				
Concatenations Filter Prescan Normalize, Elliptical filter Coil elements HEA;HEP Orientation TD Off Magn. preparation Filty angle Fat suppr. Water suppr. None Water suppr. Adjustment Tolerance Adjust volume Position None Resolution Position None Resolution Position None Resolution Position None Resolution Position None Reduction None Resolution Position None Reduction None Reduction None Position None Reduction None Reduction None Position None Reduction None Reduction None None None None None None None No		4.00 ms		
Filter Prescan Normalize, Elliptical filter Coil elements HEA;HEP Contrast TD Off Magn. preparation Flip angle Fat suppr. Water suppr. None Water suppr. Averaging mode Reconstruction Magnitude Reconstruction Magnitude Measurements Multiple series Prescan Normalize, Elliptical Fliptical Position Position Nore Position Orientation None Rotation O.00 deg R >> L 350 mm A >> P 263 mm F >> H 350 mm Physio Ist Signal/Mode None Segments 1 Dark blood Off Resp. control Off Resp. control Off Subtract Liver registration Off Liver registration Off				
Coil elements	Concatenations	3		Auto
Filter Position Isocenter Coil elements HEA;HEP Orientation Transversal Rotation 0.00 deg R >> L 350 mm A >> P 263 mm F >> H 350 mm A >> P 263 mm A >> P 2	Filter	Prescan Normalize, Elliptical	Adjust volume	
Coil elements HEA;HEP Contrast TD Oms MTC Off Magn. preparation Flip angle Fat suppr. Water suppr. Averaging mode Reconstruction Magnitude Reconstruction Magnitude Measurements Multiple series 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 Resp. control Off Corientation Transversal None Resp. L 350 mm A >> P 263 mm F >> H 350 mm None Dark blood Off Resp. control Off Corientation None Resp. control Off Liver registration Off Liver registration Off Corientation Transversal Rotation D.00 deg R >> L 350 mm A >> P 263 mm A >> P 263 mm A >> P 263 mm A >> P A >> P A >> P 263 mm A >> P			Position	Isocenter
Rotation 0.00 deg R >> L 350 mm A >> P 263 mm A >> P	Coil elements			Transversal
Contrast R >> L 350 mm TD 0 ms A >> P 263 mm MTC Off F >> H 350 mm Magn. preparation None F >> H 350 mm Flip angle 20 deg Physio Fat suppr. None 1st Signal/Mode None Water suppr. None Segments 1 Averaging mode Short term Dark blood Off Reconstruction Magnitude Resp. control Off Measurements 1 Inline Resolution Subtract Off Resolution Subtract Off Liver registration Off	1 00 0.0	· · · · · · · · · ·	Rotation	
TD 0 ms A >> P 263 mm MTC Off F >> H 350 mm Magn. preparation None Flip angle 20 deg Physio Fat suppr. None 1st Signal/Mode None Water suppr. None Segments 1 Averaging mode Short term Dark blood Off Reconstruction Magnitude Resourcements 1 Multiple series Each measurement Resolution Subtract Off Liver registration Off	Contrast			•
MTC Off F >> H 350 mm Magn. preparation None Physio Fat suppr. None 1st Signal/Mode None Water suppr. None Segments 1 Averaging mode Short term Dark blood Off Reconstruction Magnitude Resp. control Off Measurements 1 Inline Resolution Subtract Off Resolution Subtract Off Liver registration Off	TD	0 ms		
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 Subtract Off Liver registration Off Liver registration Off	MTC	Off		
Flip angle 20 deg Physio Fat suppr. None 1st Signal/Mode None Water suppr. None Segments 1 Averaging mode Short term Dark blood Off Reconstruction Magnitude Resurements 1 Multiple series Each measurement Inline Resolution Subtract Off Liver registration Off			'	550 mm
Fat suppr. Water suppr. None Averaging mode Reconstruction Measurements Multiple series Resolution Resolution Resolution Resolution Resolution None Segments 1 Dark blood Off Resp. control Off Resp. control Off Inline Subtract Liver registration Off Liver registration Off			Physio	
Water suppr. Averaging mode Short term Dark blood Off Reconstruction Magnitude Resp. control Off Multiple series Each measurement Inline Resolution Subtract Off Liver registration Off		-		None
Averaging mode Short term Dark blood Off Reconstruction Magnitude Resp. control Off Multiple series Each measurement Inline Resolution Subtract Off Liver registration Off				
Reconstruction Magnitude Resp. control Off Measurements 1 Multiple series Each measurement Inline Resolution Subtract Off Liver registration Off	νναισι ουμμι.			
Reconstruction Magnitude Resp. control Off Measurements 1 Multiple series Each measurement Inline Resolution Subtract Off Liver registration Off	Averaging mode	Short term	Dark blood	Off
Measurements 1 Multiple series Each measurement Inline Resolution Resp. control Inline Subtract Liver registration Off Off Off Off Off Off Off O				
Multiple series Each measurement Inline Resolution Subtract Off Liver registration Off		_	Resp. control	Off
Resolution Subtract Off Liver registration Off		<u>.</u> .	Inline	
Resolution Liver registration Off	Inimitible selles	Laurineasurenient		Off
Laco recolution 266	Resolution			_
Std-Dev-Sag Off	Base resolution	256		
	ı		Sta-Dev-Sag	UII

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
II.	

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Voxel size: 1.0×1.0×2.0 mm Rel. SNR: 1.00

SIEMENS: haste

PAT: 2

TA: 0:17

Properties		Elliptical filter Mode	On Inplane
Prio Recon	Off	— Wode	приле
Before measurement		Geometry	
After measurement		Multi-slice mode	Single shot
Load to viewer	On	Series	Interleaved
Inline movie	Off		
Auto store images	On	Special sat.	None
Load to stamp segments	Off		
Load images to graphic	Off	Tim CT mode	Off
segments	0.11	Custom	
Auto open inline display	Off	System	0"
Start measurement without	On	Body	Off
	On	HEP	On
further preparation	Off	HEA	On
Wait for user to start		Positioning mode	FIX
Start measurements	single	Table position	Н
Routine		Table position	0 mm
Slice group 1			_
Slices	40	MSMA	S-C-T
Dist. factor	0 %	Sagittal	R >> L
Position	L9.8 A12.5 H37.9	Coronal	A >> P
Orientation		Transversal	F >> H
	Sagittal	Save uncombined	Off
Phase enc. dir.	A >> P	Coil Combine Mode	Adaptive Combine
Rotation	0.00 deg	AutoAlign	
Phase oversampling	0 %	Auto Coil Select	Default
FoV read	192 mm	Chima manda	T
FoV phase	100.0 %	Shim mode	Tune up
Slice thickness	2.0 mm	Adjust with body coil	Off
TR	395 ms	Confirm freq. adjustment	Off
TE	76 ms	Assume Silicone	Off
Averages	1	? Ref. amplitude 1H	0.000 V
Concatenations	1	Adjustment Tolerance	Auto
Filter	Normalize, Elliptical filter	Adjust volume	
Coil elements	HEA;HEP	Position	Isocenter
	,	Orientation	Transversal
Contrast		Rotation	0.00 deg
MTC	Off	R >> L	350 mm
Magn. preparation	None	A >> P	263 mm
Flip angle	110 deg	F >> H	350 mm
Fat suppr.	None		
Water suppr.	None	Physio	
Restore magn.	Off	1st Signal/Mode	None
Averaging mode	Long term	Dark blood	Off
Reconstruction	Magnitude	Resp. control	Off
Measurements	1	1.00p. control	5 11
Multiple series	Each measurement	Inline	
•		Subtract	Off
Resolution		Std-Dev-Sag	Off
Base resolution	192	Std-Dev-Cor	Off
Phase resolution	100 %	Std-Dev-Tra	Off
Phase partial Fourier	5/8	Std-Dev-Time	Off
Interpolation	Off	MIP-Sag	Off
DAT!-	ODADDA	MIP-Cor	Off
PAT mode	GRAPPA	MIP-Tra	Off
Accel. factor PE	2	MIP-Time	Off
Ref. lines PE	24		On
Matrix Coil Mode	Auto (Triple)	Save original images	Oli
Reference scan mode	Integrated	Sequence	
Image Filter	Off	Introduction	On
Distortion Corr.	Off	Dimension	2D
	Off	Contrasts	1
Drescan Normaliza	V 711		•
Prescan Normalize		Bandwidth	592 Hz/Px
Normalize	On	Bandwidth Flow comp	592 Hz/Px No
		Bandwidth Flow comp. Allowed delay	592 Hz/Px No 30 s

Echo spacing	5.82 ms
Turbo factor	192
RF pulse type	Fast
Gradient mode	Fast

\\USER\AMRIT\Liyong\20150727\gre_david

TA: 0:45 F	PAT: 2 Voxel size: 0.9×0.8×	3.0 mm Rel. SNR: 1.00	SIEMENS: gre
Properties		B1 filter	Off
	0#	- Raw filter	Off
Prio Recon	Off	Elliptical filter	On
Before measurement		Mode	Inplane
After measurement	0.5	Coomotru	
Load to viewer	On Off	Geometry	O artial
Inline movie	Off	Multi-slice mode	Sequential
Auto store images	On	Series	Interleaved
Load to stamp segments	Off	Saturation mode	Standard
Load images to graphic	Off	Special sat.	None
segments			
Auto open inline display	Off	Tim CT mode	Off
Start measurement without	On	I min or mode	Oli
further preparation		System	
Wait for user to start	Off	Body	Off
Start measurements	single	HEP	On
Douting		HEA	On
Routine		_	
Slice group 1	40	Positioning mode	REF
Slices	40	Table position	Н
Dist. factor	20 %	Table position	0 mm
Position	L11.5 A13.1 H33.3	MSMA	S - C - T
Orientation	Transversal	Sagittal	R >> L
Phase enc. dir.	A >> P	Coronal	A >> P
Rotation	0.00 deg	Transversal	F >> H
Phase oversampling	0 %	Save uncombined	Off
FoV read	200 mm	Coil Combine Mode	Adaptive Combine
FoV phase	100.0 %	AutoAlign	
Slice thickness	3.0 mm	Auto Coil Select	Default
TR	8.6 ms		
TE	4.00 ms	Shim mode	Tune up
Averages	1	Adjust with body coil	Off
Concatenations	40	Confirm freq. adjustment	Off
Filter	Prescan Normalize, Elliptical	Assume Silicone	Off
1 1101	filter	? Ref. amplitude 1H	0.000 V
Coil elements	HEA;HEP	Adjustment Tolerance	Auto
Con elements	IILA,IILI	Adjust volume	
Contrast		Position	Isocenter
TD	0 ms	Orientation	Transversal
MTC	Off	Rotation	0.00 deg
Magn. preparation	None	R >> L	350 mm
Flip angle	20 deg	A >> P	263 mm
Fat suppr.	None	F >> H	350 mm
Water suppr.	None	1 22 11	000 111111
	Oht t	Physio	
Averaging mode	Short term	1st Signal/Mode	None
Reconstruction	Magnitude	Segments	1
Measurements	1	Dark blood	Off
Multiple series	Each measurement	Dark blood	OII
Resolution		Resp. control	Off
Base resolution	256	<u>-</u> '	
Phase resolution	90 %	Inline	
	Off	Subtract	Off
Phase partial Fourier		Liver registration	Off
Interpolation	On	Std-Dev-Sag	Off
PAT mode	GRAPPA	Std-Dev-Cor	Off
Accel. factor PE	2	Std-Dev-Tra	Off
Ref. lines PE	24	Std-Dev-Time	Off
Matrix Coil Mode	Auto (Triple)	MIP-Sag	Off
Reference scan mode	Integrated	MIP-Cor	Off
		MIP-Tra	Off
Image Filter	Off	MIP-Time	Off
Distortion Corr.	Off	Save original images	On
Unfiltered images	Off		
Prescan Normalize	On	Wash - In	Off
FIESCAII NOITIAILZE	OII	Wash - Out	Off

TTP PEI MIP - time	Off Off 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

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Voxel size: 1.0×1.0×4.0 mm Rel. SNR: 1.00

SIEMENS: haste

PAT: 2

TA: 0:17

Properties		Elliptical filter Mode	On Inplane
Prio Recon	Off	— Mode	inpiane
Before measurement		Geometry	
After measurement		Multi-slice mode	Single shot
Load to viewer	On	Series	Interleaved
Inline movie	Off		
Auto store images	On	Special sat.	None
Load to stamp segments	Off		
Load images to graphic	Off	Tim CT mode	Off
segments	.	System	
Auto open inline display	Off	System	Off
Start measurement without	On	Body	
further preparation	Oli	HEP	On
Wait for user to start	Off	HEA	On
Start measurements	single	Positioning mode	FIX
Start measurements	Sirigie	Table position	H
Routine		Table position	0 mm
Slice group 1		MSMA	S - C - T
Slices	40	Sagittal	R >> L
Dist. factor	0 %	Coronal	A >> P
Position	L12.7 A11.2 H77.8	Transversal	F >> H
Orientation	Transversal	Save uncombined	Off
Phase enc. dir.	A >> P	Coil Combine Mode	
Rotation	0.00 deg		Adaptive Combine
Phase oversampling	0 %	AutoAlign	 D-flt
FoV read	192 mm	Auto Coil Select	Default
FoV phase	100.0 %	Shim mode	Tune up
Slice thickness	4.0 mm	Adjust with body coil	Off
TR	395 ms	Confirm freq. adjustment	Off
		Assume Silicone	Off
TE	76 ms	? Ref. amplitude 1H	0.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	1	Adjust volume	Auto
Filter	Normalize, Elliptical filter	Position	Isocenter
Coil elements	HEA;HEP	Orientation	Transversal
Contrast		Rotation	0.00 deg
MTC	Off	R >> L	350 mm
Magn. preparation	None	A >> P	263 mm
Flip angle	117 deg	F >> H	
Fat suppr.	None	F >> F	350 mm
Water suppr.	None	Physio	
Restore magn.	Off	1st Signal/Mode	None
	Longitonia	Dark blood	Off
Averaging mode Reconstruction	Long term Magnitude		
Measurements	1	Resp. control	Off
Multiple series	Each measurement	Inline	
Multiple series	Lacifilleasurement	Subtract	Off
Resolution		Std-Dev-Sag	Off
Base resolution	192	Std-Dev-Cor	Off
Phase resolution	100 %	Std-Dev-Tra	Off
Phase partial Fourier	5/8	Std-Dev-Time	Off
Interpolation	Off		_
		MIP-Sag	Off
PAT mode	GRAPPA	MIP-Cor	Off
Accel. factor PE	2	MIP-Tra	Off
Ref. lines PE	24	MIP-Time	Off
Matrix Coil Mode	Auto (Triple)	Save original images	On
	Integrated	Sequence	
Reference scan mode		Introduction	On
	Off		
Image Filter	Off		
Image Filter Distortion Corr.	Off	Dimension	2D
Image Filter Distortion Corr. Prescan Normalize	Off Off	Dimension Contrasts	2D 1
Image Filter Distortion Corr. Prescan Normalize Normalize	Off Off On	Dimension Contrasts Bandwidth	2D 1 592 Hz/Px
Image Filter Distortion Corr. Prescan Normalize	Off Off	Dimension Contrasts	2D 1

Echo spacing	4.78 ms	
Turbo factor	192	
RF pulse type	Fast	
Gradient mode	Fast	
	Turbo factor RF pulse type	Turbo factor 192 RF pulse type Fast

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Rel. SNR: 1.00

USER: ep2d_venc_ms_sbmb_SAT

Voxel size: 1.4×1.4×4.0 mm

PAT: 2

TA: 1:19:55

Properties		Sat. region 1	
Prio Recon	Off	Thickness	50 mm
Before measurement		Position	L7.7 A95.6 F59.0
After measurement		Orientation	C > T-5.4 > S0.9
Load to viewer	On	Sat. region 2	
Inline movie	Off	Thickness	50 mm
Auto store images	On	Position	L8.3 P58.8 F38.4
Load to stamp segments	Off	Orientation	C > T-5.4 > S0.9
Load images to graphic	Off		None 5 1-5.4 > 50.9
.	Oli	Special sat.	None
segments	0"	System	
Auto open inline display	Off	Body	Off
Start measurement without	On	HEP	On
further preparation		HEA	On
Wait for user to start	Off		
Start measurements	single	Positioning mode	REF
Davitina		Table position	Н
Routine		Table position	0 mm
Slice group 1		MSMA	S - C - T
Slices	1	Sagittal	R >> L
Dist. factor	1000 %	Coronal	A >> P
Position	L9.5 A27.3 H54.7		
Orientation	S > C-0.9 > T-0.1	Transversal	F >> H
Phase enc. dir.	A >> P	Coil Combine Mode	Sum of Squares
Rotation	0.00 deg	AutoAlign	
Phase oversampling	0 %	Auto Coil Select	Default
FoV read	180 mm	Shim mode	Standard
FoV phase	100.0 %		Off
Slice thickness		Adjust with body coil	_
	4.0 mm	Confirm freq. adjustment	Off
TR	5920 ms	Assume Silicone	Off
TE	38.0 ms	? Ref. amplitude 1H	0.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	1	Adjust volume	
Filter	None	Position	L9.5 A27.3 H54.7
Coil elements	HEA;HEP	Orientation	S > C-0.9 > T-0.1
Contract		Rotation	0.00 deg
Contrast	0"	—— F>> H	180 mm
MTC	Off	A >> P	180 mm
Flip angle	25 deg	R >> L	4 mm
Fat suppr.	Fat sat.	1 11/2	1 111111
Averaging mode	Long term	Physio	
Reconstruction	Long term Magnitude	1st Signal/Mode	None
	820	'	
Measurements		Angio	
Delay in TR	0 ms	Flow mode	Single dir.
Multiple series	Off	Encodings	1
Resolution		Velocity enc.	16 cm/s
Base resolution	128	—— Direction	F >> H
Phase resolution	100 %	Magnitude sum	Off
Phase partial Fourier	6/8	Sequence	
Interpolation	Off	Introduction	Off
PAT mode	GRAPPA	Bandwidth	1628 Hz/Px
Accel. factor PE	2	Free echo spacing	Off
Ref. lines PE	24	Echo spacing	0.96 ms
Matrix Coil Mode	Auto (Triple)	EPI factor	128
Reference scan mode	Separate	RF pulse type	Normal
Distortion Corr.	Off	Gradient mode	Fast
Prescan Normalize	Off	RF spoiling	On
		DE00 1 4	
Raw filter	Off Off	RF90 duration	5120
Elliptical filter	Off	MB Number	1
Hamming	Off	DummyScan Number	5
Geometry		FOV Shift Number	1
Multi-slice mode	Interleaved	——— Shift K0 Center	1
Series	Ascending	Every Other Slice	1
Jelles	Ascending	22/1	

SER Number	
Venc Repetition	800
Spoil factor	5
Skew Direction	1
DualBand Sat	0
FOV Dir	0
Venc Type(0off,1+-,20+,3on,4	
00++)	

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USER: ep2d_venc_ms_sbmb_SAT

Voxel size: 1.4×1.4×4.0 mm Rel. SNR: 1.00

PAT: 2

TA: 1:20:25

			•
		<u> </u>	
Properties		Sat. region 1	
Prio Recon	Off	Thickness	50 mm
Before measurement		Position	L0.0 A86.6 H73.8
After measurement		Orientation	C > T-4.3
Load to viewer	On	Sat. region 2	
Inline movie	Off	Thickness	50 mm
Auto store images	On	Position	L0.0 P63.3 H141.2
Load to stamp segments	Off	Orientation	C > T-7.3
Load images to graphic	Off	Special sat.	None
	Oli	Special Sat.	None
segments	0"	System	
Auto open inline display	Off	Body	Off
Start measurement without	On	HEP	On
further preparation		HEA	On
Wait for user to start	Off	ПСА	
Start measurements	single	Positioning mode	FIX
I	3	Table position	H
Routine		Table position	0 mm
Slice group 1			_
Slices	2	MSMA Consistant	S-C-T
Dist. factor	1200 %	Sagittal	R >> L
Position	L0.0 A6.5 H61.7	Coronal	A >> P
Orientation	T > C7.3	Transversal	F >> H
Phase enc. dir.	A >> P	Coil Combine Mode	Sum of Squares
		AutoAlign	
Rotation	0.00 deg	Auto Coil Select	Default
Phase oversampling	0 %		
FoV read	180 mm	Shim mode	Standard
FoV phase	100.0 %	Adjust with body coil	Off
Slice thickness	4.0 mm	Confirm freq. adjustment	Off
TR	5920 ms	Assume Silicone	Off
TE	38.0 ms	? Ref. amplitude 1H	0.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	1	Adjust volume	71010
Filter	None	Position	L0.0 A6.5 H61.7
Coil elements	HEA;HEP	Orientation	T > C7.3
Con elements	TILA,TILI		
Contrast		Rotation	0.00 deg
MTC	Off	R >> L	180 mm
Flip angle	25 deg	A >> P	180 mm
Fat suppr.	Fat sat.	F >> H	56 mm
	·	Physic	
Averaging mode	Long term	Physio	N
Reconstruction	Magnitude	1st Signal/Mode	None
Measurements	820	Angio	
Delay in TR	0 ms	Flow mode	Single dir.
Multiple series	Off		onigie dir.
Widitiple series	Oli	Encodings	1
Resolution		Velocity enc.	16 cm/s
Base resolution	128	—— Direction	Through plane
Phase resolution	100 %	Magnitude sum	Off
Phase partial Fourier	6/8	Sequence	
Interpolation	Off		0#
Interpolation	OII	Introduction	Off
PAT mode	GRAPPA	Bandwidth	1628 Hz/Px
Accel. factor PE	2	Free echo spacing	Off
Ref. lines PE	24	Echo spacing	0.96 ms
Matrix Coil Mode	Auto (Triple)	EDI fostor	120
		EPI factor	128
Reference scan mode	Separate	RF pulse type	Normal
Distortion Corr.	Off	Gradient mode	Fast
Prescan Normalize	Off	RF spoiling	On
Raw filter	Off	DEOO duration	£120
		RF90 duration	5120
Elliptical filter	Off Off	MB Number	2
Hamming	Off	DummyScan Number	5
Geometry		FOV Shift Number	3
Multi-slice mode	Interleaved	——— Shift K0 Center	1
Series	Ascending	Every Other Slice	1
Octios	Ascending	ı	

SER Number	1
Venc Repetition	800
Spoil factor	5
Skew Direction	1
DualBand Sat	0
FOV Dir	0
Venc Type(0off,1+-,20+,3on,4	1
00++)	

 $\label{localize} $$\USER\AMRIT\Liyong\20150727\ep_seg_fid33_venc20_low$$$

TA: 2:24	Voxel size: 1.4×1.4×4.0 mm	Rel. SNR: 1.00 USER: e	p_seg_fid_venc
Properties		Body	Off
Prio Recon	Off	- HEP	On
Before measurement	OII	HEA	On
After measurement		Positioning mode	FIX
Load to viewer	On	Table position	H
Inline movie	Off	Table position	0 mm
Auto store images	On	MSMA	S - C - T
Load to stamp segments	Off	Sagittal	R >> L
Load images to graphic	Off	Coronal	A >> P
segments	OII	Transversal	F >> H
Auto open inline display	Off	Save uncombined	Off
Start measurement without	On	Coil Combine Mode	Sum of Squares
further preparation	5	AutoAlign	
Wait for user to start	Off	Auto Coil Select	Default
Start measurements	single		
	S.I.ig.S	Shim mode	Standard
Coutine		Adjust with body coil	Off
Slice group 1		Confirm freq. adjustment	Off
Slices	1	Assume Silicone	Off
Dist. factor	50 %	? Ref. amplitude 1H	0.000 V
Position	L8.7 A18.2 H39.3	Adjustment Tolerance	Auto
Orientation	Transversal	Adjust volume	
Phase enc. dir.	A >> P	Position	L8.7 A18.2 H39.3
Rotation	0.00 deg	Orientation	Transversal
Phase oversampling	0 %	Rotation	0.00 deg
FoV read	180 mm	R >> L	180 mm
FoV phase	100.0 %	A >> P	180 mm
Slice thickness	4.0 mm	F >> H	4 mm
TR	36 ms	Physio	
TE	18 ms	1st Signal/Mode	None
Averages	1	Segments	4
Concatenations	1		
Filter	None	Resp. control	Off
Coil elements	HEA;HEP	Sequence	
Contrast		Introduction	Off
MTC	Off	Dimension	2D
Flip angle	15 deg	Bandwidth	1502 Hz/Px
Fat suppr.	None	Free echo spacing	Off
		Echo spacing	0.87 ms
Averaging mode Reconstruction	Long term Magnitude		
Measurements	800	EPI factor	33
Pause after meas.	0.0 s	RF pulse type	Normal
	Off	Gradient mode	Fast
Multiple series	Oli	RF spoiling	On
Resolution		Flow Compensation	Off
Base resolution	128	Centric Reorder	On
Phase resolution	100 %	Pat Ref Scan	On
Phase partial Fourier	Off	VENC value	400
Interpolation	Off	Undersampled	On
Matrix Coil Mode	Auto (CP)	'	
Distantian Carr			
Distortion Corr.	Off		
Prescan Normalize	Off		
Raw filter	Off		
Elliptical filter	Off		
Hamming	Off		
Geometry	Cognitation	_	
Multi-slice mode	Sequential		
Series	Ascending		

Properties		Body	Off
Prio Recon	Off	HEP	On
Before measurement	Oli	HEA	On
After measurement		Positioning mode	FIX
Load to viewer	On	Table position	Н
Inline movie	Off	Table position	0 mm
Auto store images	On	MSMA	S - C - T
Load to stamp segments	Off	Sagittal	R >> L
Load images to graphic	Off	Coronal	A >> P
segments	Oil	Transversal	F>> H
Auto open inline display	Off	Save uncombined	Off
Start measurement without	On	Coil Combine Mode	Sum of Squares
	Oli		Sum of Squares
further preparation	Off	AutoAlign Auto Coil Select	Default
Wait for user to start		Auto Coll Select	Derauit
Start measurements	single	Shim mode	Standard
Routine		Adjust with body coil	Off
Slice group 1		Confirm freq. adjustment	Off
Slices	1	Assume Silicone	Off
Dist. factor	50 %	? Ref. amplitude 1H	0.000 V
Position	L8.7 A18.2 H39.3	Adjustment Tolerance	Auto
Orientation	Transversal	Adjust volume	
Phase enc. dir.	A >> P	Position	L8.7 A18.2 H39.3
Rotation	0.00 deg	Orientation	Transversal
Phase oversampling	0 %	Rotation	0.00 deg
FoV read	180 mm	R >> L	180 mm
FoV phase	100.0 %	A >> P	180 mm
Slice thickness	4.0 mm	F >> H	4 mm
TR	36 ms		4 111111
TE		Physio	
	18 ms	1st Signal/Mode	None
Averages	1	Segments	4
Concatenations	1 Name		
Filter	None	Resp. control	Off
Coil elements	HEA;HEP	Sequence	
Contrast		Introduction	Off
MTC	Off	Dimension	2D
Flip angle	15 deg	Bandwidth	1502 Hz/Px
Fat suppr.	None	Free echo spacing	Off
		Echo spacing	0.87 ms
Averaging mode	Long term		
Reconstruction	Magnitude	EPI factor	33
Measurements	800	RF pulse type	Normal
Pause after meas.	0.0 s	Gradient mode	Fast
Multiple series	Off	RF spoiling	On
Resolution		Flow Commonation	Ο <u>μ</u>
Base resolution	128	Flow Compensation	Off
	100 %	Centric Reorder	On
Phase resolution		Pat Ref Scan	On
Phase partial Fourier	Off	VENC value	1000
Interpolation	Off	Undersampled	On
Matrix Coil Mode	Auto (CP)		
Distortion Corr.	Off		
Prescan Normalize	Off		
Raw filter	Off		
Elliptical filter	Off		
Hamming	Off		
-	Oil		
Geometry	Ozamanti I		
Multi-slice mode	Sequential		
Series	Ascending		

 $\verb|\USER\AMRIT\Liyong\20150727\ep_seg_fid33_venc30_high| \\$

TA: 3:00	Voxel size: 1.2×1.2×4.0 mm	Rel. SNR: 1.00 USER: e	p_seg_fid_venc
D .:		Body	Off
Properties		- HEP	On
Prio Recon	Off	HEA	On
Before measurement			
After measurement	0.5	Positioning mode	FIX
Load to viewer	On Off	Table position	Н
Inline movie	Off	Table position	0 mm
Auto store images	On O"	MSMA	S-C-T
Load to stamp segments	Off	Sagittal	R >> L
Load images to graphic	Off	Coronal	A >> P
segments	0"	Transversal	F >> H
Auto open inline display	Off	Save uncombined	Off
Start measurement without	On	Coil Combine Mode	Sum of Squares
further preparation	0#	AutoAlign Auto Coil Select	Defectly
Wait for user to start	Off	Auto Coil Select	Default
Start measurements	single	Shim mode	Standard
Routine		Adjust with body coil	Off
Slice group 1		Confirm freq. adjustment	Off
Slices	1	Assume Silicone	Off
Dist. factor	50 %	? Ref. amplitude 1H	0.000 V
Position	L4.8 P13.1 H99.0	Adjustment Tolerance	Auto
Orientation	Transversal	Adjust volume	
Phase enc. dir.	R >> L	Position	L4.8 P13.1 H99.0
Rotation	90.00 deg	Orientation	Transversal
Phase oversampling	0 %	Rotation	90.00 deg
FoV read	150 mm	A >> P	150 mm
FoV phase	100.0 %	R >> L	150 mm
Slice thickness	4.0 mm	F >> H	4 mm
TR	45 ms	1 >> 11	7 11111
TE	22 ms	Physio	
Averages	1	1st Signal/Mode	None
Concatenations	1	Segments	4
Filter	None	Poor control	Off
Coil elements	HEA;HEP	Resp. control	Oil
	11273,1121	Sequence	
Contrast		Introduction	Off
MTC	Off	Dimension	2D
Flip angle	15 deg	Bandwidth	1002 Hz/Px
Fat suppr.	None	Free echo spacing	Off
Averaging mode	Long torm	Echo spacing	1.14 ms
Reconstruction	Long term Magnitude	EDI fortor	
Measurements	800	EPI factor	33 Normal
Pause after meas.	0.0 s	RF pulse type	Normal
Multiple series	Off	Gradient mode	Fast
·	Oil	RF spoiling	On
Resolution		Flow Compensation	Off
Base resolution	128	Centric Reorder	On
Phase resolution	100 %	Pat Ref Scan	On
Phase partial Fourier	Off	VENC value	600
Interpolation	Off	Undersampled	On
Matrix Coil Mode	Auto (CP)	'	
Distortion Corr.	Off		
Prescan Normalize	Off		
Raw filter	Off		
ואמא וווגבו			
Elliptical filter	Off Off		
Elliptical filter Hamming	Off		
Elliptical filter Hamming Geometry	Off	_	
Elliptical filter Hamming Geometry Multi-slice mode	Off Sequential	-	
Elliptical filter Hamming Geometry	Off	-	
Elliptical filter Hamming Geometry Multi-slice mode	Off Sequential	-	

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TA: 2:24	Voxel size: 1.4×1.4×4.0 mm	Rel. SNR: 1.00 USER: e	p_seg_fid_venc
Properties		Body	Off
Prio Recon	Off	HEP	On
Before measurement	Oli	HEA	On
After measurement		Positioning mode	FIX
Load to viewer	On	Table position	H
Inline movie	Off	Table position	0 mm
Auto store images	On	MSMA	S - C - T
Load to stamp segments	Off	Sagittal	R >> L
Load images to graphic	Off	Coronal	A >> P
segments		Transversal	F >> H
Auto open inline display	Off	Save uncombined	Off
Start measurement without	On	Coil Combine Mode	Sum of Squares
further preparation		AutoAlign	
Wait for user to start	Off	Auto Coil Select	Default
Start measurements	single	Shim mode	Standard
Routine		Adjust with body coil	Off
Slice group 1		Confirm freq. adjustment	Off
Slices	1	Assume Silicone	Off
Dist. factor	50 %	? Ref. amplitude 1H	0.000 V
Position	L7.1 P6.8 H27.2	Adjustment Tolerance	Auto
Orientation	T > S8.3	Adjust volume	rate
Phase enc. dir.	A >> P	Position	L7.1 P6.8 H27.2
Rotation	0.00 deg	Orientation	T > S8.3
Phase oversampling	0 %	Rotation	0.00 deg
FoV read	180 mm	R >> L	180 mm
FoV phase	100.0 %	A >> P	180 mm
Slice thickness	4.0 mm	F >> H	4 mm
TR	36 ms	Dharia	
TE	18 ms	Physio	Maya
Averages	1	1st Signal/Mode	None 4
Concatenations	1	Segments	4
Filter	None	Resp. control	Off
Coil elements	HEA;HEP	Sequence	
Contrast		Introduction	Off
MTC	Off	Dimension	2D
Flip angle	15 deg	Bandwidth	1502 Hz/Px
Fat suppr.	None	Free echo spacing	Off
		Echo spacing	0.87 ms
Averaging mode	Long term		
Reconstruction Measurements	Magnitude 800	EPI factor	33
Pause after meas.	0.0 s	RF pulse type	Normal
Multiple series	Off	Gradient mode	Fast
•	Oli	RF spoiling	On
Resolution	<u> </u>	Flow Compensation	Off
Base resolution	128	Centric Reorder	On
Phase resolution	100 %	Pat Ref Scan	On
Phase partial Fourier	Off	VENC value	100
Interpolation	Off	Undersampled	On
Matrix Coil Mode	Auto (CP)		
Distortion Corr.	Off		
Prescan Normalize	Off		
Raw filter	Off		
Elliptical filter	Off		
Hamming	Off		
Geometry			
	Cognontial		
Multi-slice mode	Sequential		
Multi-slice mode Series	Ascending		

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TA: 0:13 PA	AT: Off Voxel size: 1.1×1.0×	•	SIEMENS: gre
Dranautica		Phase resolution	90 %
Properties	0#	Phase partial Fourier	Off
Prio Recon Before measurement	Off	Interpolation	On
After measurement		PAT mode	None
Load to viewer	On	Matrix Coil Mode	Auto (CP)
Inline movie	Off		
Auto store images	On	Image Filter Distortion Corr.	Off Off
Load to stamp segments	Off	Unfiltered images	Off
Load images to graphic	Off	Prescan Normalize	On
segments Auto open inline display	Off	Normalize	Off
Start measurement without	Off	B1 filter	Off
further preparation		Raw filter	Off
Wait for user to start	Off	Elliptical filter	On
Start measurements	single	Mode	Inplane
Routine		Geometry	
Slice group 1		- Multi-slice mode	Sequential
Slices	1	Series	Interleaved
Dist. factor	20 %	Saturation mode	Standard
Position	Isocenter	Special sat.	None
Orientation	Sagittal		
Phase enc. dir.	A >> P	Tim CT mode	Off
Rotation Slice group 2	0.00 deg	System	
Slices	1	Body	Off
Dist. factor	20 %	HEP	On
Position	Isocenter	HEA	On
Orientation	Transversal	Positioning mode	REF
Phase enc. dir.	A >> P	Table position	H
Rotation	0.00 deg	Table position	0 mm
Slice group 3		MSMA	S - C - T
Slices	1	Sagittal	R >> L
Dist. factor Position	20 %	Coronal	A >> P
Orientation	Isocenter Coronal	Transversal	F >> H
Phase enc. dir.	R >> L	Save uncombined	Off
Rotation	0.00 deg	Coil Combine Mode AutoAlign	Adaptive Combine
Phase oversampling	0 %	Auto Coil Select	 Default
FoV read	250 mm		
FoV phase	100.0 %	Shim mode	Tune up
Slice thickness	7.0 mm	Adjust with body coil	Off Off
TR	8.6 ms	Confirm freq. adjustment Assume Silicone	Off
TE Averages	4.00 ms 2	? Ref. amplitude 1H	0.000 V
Concatenations	3	Adjustment Tolerance	Auto
Filter	Prescan Normalize, Elliptical	Adjust volume	
	filter	Position	Isocenter
Coil elements	HEA;HEP	Orientation	Transversal
Contrast		Rotation R >> L	0.00 deg 350 mm
TD	0 ms	A >> P	263 mm
MTC	Off	F >> H	350 mm
Magn. preparation	None	I	
Flip angle	20 deg	Physio	None
Fat suppr.	None	1st Signal/Mode Segments	None 1
Water suppr.	None		·
Averaging mode	Short term	Dark blood	Off
Reconstruction	Magnitude	Resp. control	Off
Measurements Multiple paries	T	Inline	
Multiple series	Each measurement	Subtract	Off
Resolution		Liver registration	Off
Base resolution	256	Std-Dev-Sag	Off
		447:	

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
1	

\\USER\AMRIT\Liyong\20150727\t2_haste_sag_p2

		l Width	4
roperties	0,0	Unfiltered images	Off
Prio Recon	Off	B1 filter	Off
Before measurement		Raw filter	Off
After measurement		Elliptical filter	On
Load to viewer	On	Mode	Inplane
Inline movie	Off		P
Auto store images	On	Geometry	
Load to stamp segments	Off	Multi-slice mode	Single shot
Load images to graphic	Off	Series	Interleaved
segments		Special sat.	None
Auto open inline display	Off		
Start measurement without	On	Tim CT mode	Off
further preparation		1 mode	Oli
Wait for user to start	Off	System	
Start measurements	single	Body	Off
Routine		HEP	On
Slice group 1		— HEA	On
Slices	30	Docitioning made	EIV
Dist. factor	0 %	Positioning mode	FIX
Position	R0.9 A16.5 H52.3	Table position	H 0 mm
Orientation	Sagittal	Table position	0 mm
Phase enc. dir.	A >> P	MSMA	S-C-T
Rotation	0.00 deg	Sagittal	R >> L
	0.00 deg 0 %	Coronal	A >> P
Phase oversampling		Transversal	F >> H
FoV read	192 mm	Save uncombined	Off
FoV phase	100.0 %	Coil Combine Mode	Adaptive Combine
Slice thickness	2.0 mm	AutoAlign	
TR	395 ms	Auto Coil Select	Default
TE	76 ms	Chim made	Tuno un
Averages	1	Shim mode	Tune up
Concatenations	1	Adjust with body coil	Off
Filter	Normalize, Elliptical filter	Confirm freq. adjustment	Off
Coil elements	HEA;HEP	Assume Silicone	Off
Contrast		? Ref. amplitude 1H	0.000 V
MTC	Off	Adjustment Tolerance	Auto
	None	Adjust volume	_
Magn. preparation		Position	Isocenter
Flip angle	110 deg	Orientation	Transversal
Fat suppr.	None	Rotation	0.00 deg
Water suppr.	None	R >> L	350 mm
Restore magn.	Off	A >> P	263 mm
Averaging mode	Long term	F >> H	350 mm
Reconstruction	Magnitude	Physic	
Measurements	1	Physio	None
Multiple series	Each measurement	1st Signal/Mode	None
·		Dark blood	Off
Resolution			
Base resolution	192	Resp. control	Off
Phase resolution	100 %	Inline	
Phase partial Fourier	5/8	Subtract	Off
Interpolation	Off	Std-Dev-Sag	Off
	ODADDA	Std-Dev-Sag Std-Dev-Cor	Off
PAT mode	GRAPPA	Std-Dev-Cor Std-Dev-Tra	
Accel. factor PE	2		Off
Ref. lines PE	24	Std-Dev-Time	Off
Matrix Coil Mode	Auto (Triple)	MIP-Sag	Off
Reference scan mode	Integrated	MIP-Cor	Off
Innana Ciltar		MIP-Tra	Off
Image Filter	Off	MIP-Time	Off
Distortion Corr.	Off	Save original images	On
Prescan Normalize	Off	1	
Normalize	On	Sequence	
Intensity	Medium	Introduction	On 2D
Cut off		Dimension	

Contrasts	1
Bandwidth	592 Hz/Px
Flow comp.	No
Allowed delay	30 s
Echo spacing	5.82 ms
 Turbo factor	192
RF pulse type	Fast
Gradient mode	Fast

\\USER\AMRIT\Liyong\20150727\ep2d_venc8_fast_basal_venc8

Rel. SNR: 1.00

USER: ep2d_venc_ms_sbmb_SAT

Voxel size: 1.4×1.4×4.0 mm

PAT: 2

TA: 1:19:55

Properties		Sat. region 1	
Prio Recon	Off	Thickness	50 mm
Before measurement		Position	R1.1 A81.7 F99.5
After measurement		Orientation	C > T-5.4 > S0.9
Load to viewer	On	Sat. region 2	
Inline movie	Off	Thickness	50 mm
Auto store images	On	Position	R0.5 P72.7 F78.8
Load to stamp segments	Off	Orientation	C > T-5.4 > S0.9
Load images to graphic	Off	Special sat.	None
o .	Oli	Special sat.	None
segments	0#	System	
Auto open inline display	Off	Body	Off
Start measurement without	On	HEP	On
further preparation		HEA	On
Wait for user to start	Off		
Start measurements	single	Positioning mode	FIX
Routine		Table position	Н
		Table position	0 mm
Slice group 1	4	MSMA	S-C-T
Slices	1	Sagittal	R >> L
Dist. factor	1000 %	Coronal	A >> P
Position	L5.4 A15.4 H30.0	Transversal	F >> H
Orientation	Transversal	Coil Combine Mode	Sum of Squares
Phase enc. dir.	A >> P	AutoAlign	
Rotation	0.00 deg	Auto Coil Select	
Phase oversampling	0 %	Auto Coll Select	Default
FoV read	180 mm	Shim mode	Standard
FoV phase	100.0 %	Adjust with body coil	Off
Slice thickness	4.0 mm	Confirm freq. adjustment	Off
TR	5920 ms	Assume Silicone	Off
TE	34.0 ms	? Ref. amplitude 1H	0.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	1	Adjust volume	Auto
Filter	None		LE 4 A4E 4 H2O O
Coil elements	HEA;HEP	Position	L5.4 A15.4 H30.0
Con elements	пен,пер	Orientation	Transversal
Contrast		Rotation	0.00 deg
MTC	Off	—— R >> L	180 mm
Flip angle	25 deg	A >> P	180 mm
Fat suppr.	Fat sat.	F >> H	4 mm
		Physio	
Averaging mode	Long term	1st Signal/Mode	None
Reconstruction	Magnitude	13t Signal/Mode	None
Measurements	820	Angio	
Delay in TR	0 ms	Flow mode	Single dir.
Multiple series	Off	Encodings	1
Deselution		Velocity enc.	16 cm/s
Resolution		—— Direction	R >> L
Base resolution	128	Magnitude sum	Off
Phase resolution	100 %	magnitude out	
Phase partial Fourier	6/8	Sequence	
Interpolation	Off	Introduction	Off
DAT mode	CDADDA	Bandwidth	1628 Hz/Px
PAT mode	GRAPPA	Free echo spacing	Off
Accel. factor PE	2	Echo spacing	0.96 ms
Ref. lines PE	24		
Matrix Coil Mode	Auto (Triple)	EPI factor	128
Reference scan mode	Separate	RF pulse type	Normal
Distortion Corr.	Off	Gradient mode	Fast
Prescan Normalize	Off	RF spoiling	On
Raw filter			5400
	Off Off	RF90 duration	5120
Elliptical filter	Off	MB Number	1
Hamming	Off	DummyScan Number	5
Geometry		FOV Shift Number	1
Multi-slice mode	Interleaved	——— Shift K0 Center	1
Series	Ascending	Every Other Slice	1
301103	, 1300 I dillig	45/	

SER Number	1
Venc Repetition	800
Spoil factor	5
Skew Direction	1
DualBand Sat	0
FOV Dir	0
Venc Type(0off,1+-,20+,3on,4	l 1
00++)	

\\USER\AMRIT\Liyong\20150727\fl_fq_mb1f1p2_venc8_res256 PAT: 2 Voxel size: 0.8×0.8×4.0 mm Rel. SNR: 1.00 USER:

TA: 1:54

USER: fl_fq_mb

roperties		Special sat.	None
Prio Recon	Off	System	
Before measurement		Body	Off
After measurement		HEP	On
Load to viewer	On	HEA	On
Inline movie	Off		
Auto store images	On	Positioning mode	FIX
Load to stamp segments	Off	Table position	Н
Load images to graphic	Off	Table position	0 mm
segments		MSMA	S - C - T
Auto open inline display	Off	Sagittal	R >> L
Start measurement without	On	Coronal	A >> P
further preparation	On	Transversal	F >> H
Wait for user to start	Off	Coil Combine Mode	Adaptive Combine
		AutoAlign	
Start measurements	single	Auto Coil Select	Default
Coutine		—— Shim mode	Tune up
Slice group 1		Adjust with body coil	Off
Slices	1	Confirm freq. adjustment	Off
Dist. factor	700 %	Assume Silicone	Off
Position	L5.4 A15.4 H30.0	? Ref. amplitude 1H	0.000 V
Orientation	Transversal	Adjustment Tolerance	Auto
Phase enc. dir.	A >> P	Adjust volume	Auto
Rotation	0.00 deg	Position	locantor
Phase oversampling	0 %	Orientation	Isocenter
FoV read	192 mm		Transversal
FoV phase	100.0 %	Rotation	0.00 deg
Slice thickness	4.0 mm	R >> L	350 mm
TR	23.60 ms	A >> P	263 mm
TE	8.02 ms	F >> H	350 mm
Averages	1	Physio	
Concatenations	1	1st Signal/Mode	Pulse/Trigger
Filter	None	Average cycle	No Signal ms
Coil elements	HEA;HEP	Captured cycle	-not set-
	11273,1121	Acquisition window	800 ms
Contrast		Trigger pulse	1
Flip angle	15 deg	Trigger bulse	0 ms
Averaging mode	Short term	Segments	1
Reconstruction	Magnitude	Phases	33
Measurements	1	Angio	
Multiple series	Each measurement	Flow mode	Single dir.
Resolution		Encodings	1
Base resolution	256	Velocity enc.	8 cm/s
Phase resolution	100 %	Direction	Through plane
Phase partial Fourier	Off	Rephased images	On
Interpolation	Off	Magnitude images	On
		Phase images	On
PAT mode	GRAPPA	· ····································	·····
Accel. factor PE	2	Subtract	Off
Ref. lines PE	24	Std-Dev-Sag	Off
Matrix Coil Mode	Auto (Triple)	Std-Dev-Cor	Off
Reference scan mode	Integrated	Std-Dev-Tra	Off
		Std-Dev-Time	Off
Image Filter	Off	MIP-Sag	Off
Distortion Corr.	Off	MIP-Cor	Off
Prescan Normalize	Off	MIP-Tra	Off
Normalize	Off	MIP-Time	Off
B1 filter	Off	_	On
Raw filter	Off	Save original images	Oli
-m	Off	Sequence	
Elliptical filter			
•		Introduction	On
Geometry	Cognoptial	Introduction Asymmetric echo	On Off
•	Sequential Interleaved		

Flow comp.	No
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
MB Number	1
FOV Shift	1
Distance22	32

\\USER\AMRIT\Liyong\20150727\ep_seg_fid33_venc8_4th_ventrical

Voxel size: 1.4×1.4×4.0 mm	Rel. SNR: 1.00 USER: e	p_seg_fid_venc
	Body	Off
Off	- HEP	On
OII	HEA	On
	Positioning mode	FIX
On		H
		0 mm
		S - C - T
		R >> L
		A >> P
Oli		F >> H
Off		Off
		Sum of Squares
Oli		
Off		Default
	Auto Con Select	Delault
Single	Shim mode	Standard
	Adjust with body coil	Off
	Confirm freq. adjustment	Off
1	Assume Silicone	Off
50 %	? Ref. amplitude 1H	0.000 V
L5.4 A9.8 H76.5	Adjustment Tolerance	Auto
Transversal		
A >> P		L5.4 A9.8 H76.5
0.00 dea		Transversal
		0.00 deg
		180 mm
		180 mm
		4 mm
-	ı	
		None
=	Segments	4
•	Poen control	Off
	Resp. control	Oli
112/3,1121	Sequence	
	Introduction	Off
	Dimension	2D
	Bandwidth	1502 Hz/Px
None	Free echo spacing	Off
Long term	Echo spacing	0.87 ms
	CDI factor	22
		33 Normal
		Normal
		Fast
Oil	RF spoiling	On
	Flow Compensation	Off
128		On
100 %	Pat Ref Scan	On
		160
		On
	- Chaordanipioa	On
Off		
	<u>-</u>	
Sequential		
Ascending		
	Off On Off On Off Off Off Off Off Off On Off Single 1 50 % L5.4 A9.8 H76.5 Transversal A >> P 0.00 deg 0 % 180 mm 100.0 % 4.0 mm 36 ms 18 ms 1 1 None HEA;HEP Off 15 deg None Long term Magnitude 800 0.0 s Off Off Off Off Off Off Off Off Off Of	Off Off Off On Off On Off Off On Off Off