

Protocol: adult_other_SCANMRIStudyGE75026x20210718_20210718213342624_5

3 Plane Localizer	PATIENT POSITION		IMAGING PARAMETERS		3 Plane Localizer
	Patient Entry	Head First	Imaging Mode	2D	
	Patient Position	Supine	Pulse Sequence	Gradient Echo	
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	Seq, Fast	
	SCAN TIMING		SCAN RANGE		
	Plane	3-PLANE	FOV	26.0	
	Series Description	3 Plane Localizer	Slice Thickness	5.0	
	Number of Echoes	1	Slice Spacing	0.0	
	IMAGE ENHANCE		ACQ TIMING		
	Filter Choice	None	Freq	256	
	GATING/TRIGGER		Phase	128	
	Auto Trigger Type	Off	Freq DIR	Unswap	
	MULTI-PHASE		NEX	1.00	
	Seperate Series	0	Phase FOV	1.00	
	Mask Phase	0	Auto Shim	Auto	
	Mask Pause	0	Phase Correction	No	
	DIFFUSION		FMRI		
	Recon All Images	On	PSD Trigger	Internal	
	CONTRAST		Slice Order	Interleaved	
	Contrast Yes/No	No	View Order	Bottom/Up	
		# of Repetitions REST	0		
		# of Repetitions ACTIVE	0		
		SAT			
		Tag Type	None		
		TRICKS			
		Pause On/Off	On		
		Auto Subtract	0		
		Auto SCIC	Off		

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Calibration Scan	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	SPGR
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, ZIP2, Calib
	SCAN TIMING		SCAN RANGE	
	Plane	AXIAL	FOV	30.0
	Series Description	Calibration Scan	Slice Thickness	9.4
	Number of Echoes	1	ACQ TIMING	
	IMAGE ENHANCE		Freq DIR	R/L
	Filter Choice	None	Auto Shim	Auto
	GATING/TRIGGER		Phase Correction	No
	Auto Trigger Type	Off	FMRI	
	MULTI-PHASE		PSD Trigger	Internal
	Seperate Series	0	Slice Order	Interleaved
	Mask Phase	0	View Order	Bottom/Up
	Mask Pause	0	# of Repetitions REST	0
	DIFFUSION		# of Repetitions ACTIVE	0
	Recon All Images	On	SAT	
	CONTRAST		Tag Type	None
	Contrast Yes/No	No	TRICKS	
		Pause On/Off	On	
		Auto Subtract	0	
		Auto SCIC	Off	

Calibration Scan

Accelerated Sagittal IR-FSPGR (MSV21)	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	SPGR
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, Asset, IrP
	Plane	SAGITTAL	SCAN RANGE	
	Series Description	Accelerated Sagittal IR-FSPGR (MSV21)	FOV	25.6
	SCAN TIMING		Slice Thickness	1.0
	Flip Angle	11	Location per Slab	200
	TE	Min Full	Overlap Locations	0
	Number of Echoes	1	ACQ TIMING	
	TI	400	Freq	256
	Receiver Bandwidth	31.25	Phase	256
	IMAGE ENHANCE		Freq DIR	S/I
	Filter Choice	None	NEX	1.00
	GATING/TRIGGER		Phase FOV	1.00
	Auto Trigger Type	Off	Auto Shim	On
	FMRI		Phase Correction	No
	PSD Trigger	Internal	USER CVS	
	View Order	Bottom/Up	User CV6	1.00
	# of Repetitions REST	0	User CV23	100.00
	# of Repetitions ACTIVE	0	MULTI-PHASE	
	SAT		Seperate Series	0
	Tag Type	None	Trigger Delay without AV	0
	TRICKS		Mask Phase	0
	Pause On/Off	On	Mask Pause	0
	Auto Subtract	0	DIFFUSION	
	Auto SCIC	2	Recon All Images	On
	OTHERS		CONTRAST	
Protocol Notes	Please do not oblique. Please do not reduce the number of slices. Please do not adjust protocol values.	Contrast Yes/No	No	

Accelerated Sagittal IR-FSPGR (MSV21)

Sagittal 3D FLAIR (MSV21)	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	Cube T2 FLAIR
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, ARC, IrP
	Plane	SAGITTAL	SCAN RANGE	
	Series Description	Sagittal 3D FLAIR (MSV21)	FOV	25.6
	SCAN TIMING		Slice Thickness	1.2
	TE	119.0	Location per Slab	186
	Number of Echoes	1	Overlap Locations	0
	TR	4800.0	ACQ TIMING	
	TI	1476	Freq	256
	Echo Train Length	182	Phase	256
	Receiver Bandwidth	31.25	Freq DIR	S/I
	IMAGE ENHANCE		NEX	1.00
	Filter Choice	None	Phase FOV	1.00
	GATING/TRIGGER		Auto Shim	Auto
	Auto Trigger Type	Off	Phase Correction	No
	FMRI		USER CVS	
	PSD Trigger	Internal	User CV5	1.00
	View Order	Bottom/Up	MULTI-PHASE	
	# of Repetitions REST	0	Seperate Series	0
	# of Repetitions ACTIVE	0	Mask Phase	0
	SAT		Mask Pause	0
	Tag Type	None	DIFFUSION	
	Fat/Water Saturation	Fat	Recon All Images	On
	TRICKS		CONTRAST	
	Pause On/Off	On	Contrast Yes/No	No
	Auto Subtract	0		
Auto SCIC	2			
OTHERS				
Protocol Notes	Please do not oblique. Please do not reduce the number of slices. Please do not adjust protocol values.			

Sagittal 3D FLAIR (MSV21)

Sagittal 3D T2 Cube (MSV21)	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	Cube
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, ZIP512, ZIP2, FR, ARC
	Plane	SAGITTAL	SCAN RANGE	
	Series Description	Sagittal 3D T2 Cube (MSV21)	FOV	25.6
	SCAN TIMING		Slice Thickness	1.0
	TE	Maximum	Location per Slab	200
	Number of Echoes	1	Overlap Locations	0
	TR	2500.0	ACQ TIMING	
	Echo Train Length	100	Freq	256
	Receiver Bandwidth	62.50	Phase	256
	IMAGE ENHANCE		Freq DIR	S/I
	Filter Choice	None	NEX	1.00
	GATING/TRIGGER		Phase FOV	1.00
	Auto Trigger Type	Off	Auto Shim	Auto
	MULTI-PHASE		Phase Correction	No
	Seperate Series	0	FMRI	
	Mask Phase	0	PSD Trigger	Internal
	Mask Pause	0	View Order	Bottom/Up
	DIFFUSION		# of Repetitions REST	0
	Recon All Images	On	# of Repetitions ACTIVE	0
	CONTRAST		SAT	
	Contrast Yes/No	No	Tag Type	None
			TRICKS	
		Pause On/Off	On	
		Auto Subtract	0	
		Auto SCIC	2	
		OTHERS		
		Protocol Notes	Imaging Tip: Copy coverage perscription from the T1.	

Sagittal 3D T2 Cube (MSV21)

Axial T2 Star (MSV21)	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	Gradient Echo
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	FC, EDR
	Plane	AXIAL	SCAN RANGE	
	Series Description	Axial T2 Star (MSV21)	FOV	22.0
	SCAN TIMING		Slice Thickness	4.0
	Flip Angle	20	Slice Spacing	0.0
	TE	20.0	ACQ TIMING	
	Number of Echoes	1	Freq	256
	TR	650.0	Phase	192
	Receiver Bandwidth	25.00	Freq DIR	A/P
	IMAGE ENHANCE		NEX	1.00
	Filter Choice	None	# of Acq. Before Pause	0
	GATING/TRIGGER		Phase FOV	1.00
	Auto Trigger Type	Off	Auto Shim	Auto
	MULTI-PHASE		Phase Correction	No
	Seperate Series	0	FMRI	
	Mask Phase	0	PSD Trigger	Internal
	Mask Pause	0	View Order	Bottom/Up
	DIFFUSION		# of Repetitions REST	0
	Recon All Images	On	# of Repetitions ACTIVE	0
	CONTRAST		SAT	
	Contrast Yes/No	No	Tag Type	None
			TRICKS	
		Pause On/Off	On	
		Auto Subtract	0	
		Auto SCIC	2	
		OTHERS		
		Protocol Notes	Please do not oblique. Please do not reduce the number of slices. Please do not adjust protocol values.	

Axial T2 Star (MSV21)

Axial rsfMRI (Eyes Open) (MSV21)	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	Gradient Echo
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	MPh, EPI
	Plane	AXIAL	SCAN RANGE	
	Series Description	Axial rsfMRI (Eyes Open) (MSV21)	FOV	22.0
	SCAN TIMING		Slice Thickness	3.4
	Flip Angle	90	Slice Spacing	0.0
	TE	30.0	ACQ TIMING	
	Number of Echoes	1	Freq	64
	TR	3000.0	Phase	64
	Number of Shots	1	Freq DIR	R/L
	IMAGE ENHANCE		NEX	1.00
	Filter Choice	None	Phase FOV	1.00
	GATING/TRIGGER		Auto Shim	Off
	Auto Trigger Type	Off	Phase Correction	Yes
	FMRI		USER CVS	
	Initial State	Control	User CV0	1.00
	PSD Trigger	Internal	MULTI-PHASE	
	View Order	Bottom/Up	Slice per Location	100
	# of Repetitions REST	0	Phase Acquisition Order	Interleaved
	# of Repetitions ACTIVE	0	Delay after Acquisition	Minimum
	SAT		Seperate Series	0
	Tag Type	None	Delay after Acquisition without AV	2
	Fat/Water Saturation	Fat	Mask Phase	0
TRICKS		Mask Pause	0	
Pause On/Off	On	DIFFUSION		
Auto Subtract	0	Recon All Images	On	
Auto SCIC	Off	CONTRAST		
OTHERS		Contrast Yes/No	No	
Protocol Notes	*Instruct patient to keep eyes open during this scan and to focus on 1 spot. Cover brain in one acq, ensure slab is positioned from inferior to superior. Must have 48 slices, please do not subtract or add any slices. Do not oblique slices. (Do not change series description)			

Axial rsfMRI (Eyes Open) (MSV21)

Axial 3D pCASL (Eyes Open) (MSV21)	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	3DASL
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, Spiral
	Plane	AXIAL	SCAN RANGE	
	Series Description	Axial 3D pCASL (Eyes Open) (MSV21)	FOV	24.0
	SCAN TIMING		Slice Thickness	4.0
	Number of Echoes	1	ACQ TIMING	
	Receiver Bandwidth	62.50	Freq	512
	IMAGE ENHANCE		Phase	8
	Filter Choice	None	Freq DIR	R/L
	GATING/TRIGGER		NEX	3.00
	Auto Trigger Type	Off	Auto Shim	Auto
	MULTI-PHASE		Phase Correction	No
	Seperate Series	0	FMRI	
	Delay after Acquisition without AV	0	PSD Trigger	Internal
	Mask Phase	0	View Order	Bottom/Up
	Mask Pause	0	# of Repetitions REST	0
	DIFFUSION		# of Repetitions ACTIVE	0
	Recon All Images	On	SAT	
CONTRAST		Tag Type	None	
Contrast Yes/No	No	TRICKS		
		Pause On/Off	On	
		Auto Subtract	0	
		Auto SCIC	Off	
		OTHERS		
		Protocol Notes	Tips: -When prescribing the 3D slab, the bottom of the slab should be positioned at the bottom of the cerebellum	

Axial 3D pCASL (Eyes Open) (MSV21)

Axial DTI (MSV21)	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	Spin Echo
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EPI, DIFF, Asset
	Plane	AXIAL	SCAN RANGE	
	Series Description	Axial DTI (MSV21)	FOV	23.2
	SCAN TIMING		Slice Thickness	2.0
	TE	Minimum	Slice Spacing	0.0
	Number of Echoes	1	ACQ TIMING	
	TR	7800.0	Freq	116
	Number of Shots	1	Phase	116
	IMAGE ENHANCE		Freq DIR	R/L
	Filter Choice	None	Phase FOV	1.00
	GATING/TRIGGER		Auto Shim	Auto
	Auto Trigger Type	Off	Phase Correction	Yes
	FMRI		USER CVS	
	PSD Trigger	Internal	User CV5	1.00
	View Order	Bottom/Up	User CV17	1.00
	# of Repetitions REST	0	MULTI-PHASE	
	# of Repetitions ACTIVE	0	Seperate Series	0
	SAT		Mask Phase	0
	Tag Type	None	Mask Pause	0
	Fat/Water Saturation	Fat	DIFFUSION	
	TRICKS		Optimized TE	Yes
	Pause On/Off	On	Diffusion Directions	Tensor
Auto Subtract	0	Number of Diffusion Directions	48	
Auto SCIC	2	Number of T2 Images	6	
OTHERS		Dual Spin Echo	Off	
Protocol Notes	Please do not oblique. Please do not reduce the number of slices. Please do not adjust protocol values.	Diffusion Tenser Processing Output	No Selection	
		Recon All Images	Off	
		CONTRAST		
		Contrast Yes/No	No	

Axial DTI (MSV21)

HighResHippo (MSV21)	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	FSE-XL
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	Fast, Asset
	Plane	OBLIQUE	SCAN RANGE	
	Series Description	HighResHippo (MSV21)	FOV	17.5
	SCAN TIMING		Slice Thickness	2.0
	Flip Angle	122	Slice Spacing	Intleave
	TE	50.0	ACQ TIMING	
	Number of Echoes	1	Freq	448
	TR	8020.0	Phase	448
	Echo Train Length	15	Freq DIR	S/I
	Receiver Bandwidth	20.83	Fat Shift DIR	Normal (I)
	IMAGE ENHANCE		NEX	1.00
	Filter Choice	None	# of Acq. Before Pause	0
	GATING/TRIGGER		Phase FOV	1.00
	Auto Trigger Type	Off	Auto Shim	Auto
	FMRI		Phase Correction	Yes
	PSD Trigger	Internal	USER CVS	
	View Order	Bottom/Up	User CV22	1.00
	# of Repetitions REST	0	MULTI-PHASE	
	# of Repetitions ACTIVE	0	Seperate Series	0
	SAT		Mask Phase	0
	Tag Type	None	Mask Pause	0
	TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On	
Auto Subtract	0	CONTRAST		
Auto SCIC	2	Contrast Yes/No	No	
OTHERS				
Protocol Notes	Angle the slices perpendicular to the hippocampul body. Please refer to the study manual for further details.			

HighResHippo (MSV21)