

Protocol: adult_head_BRAIN W WO

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	Seq, Fast
Plane	3-PLANE	SCAN RANGE	
Series Description	LOC	FOV	30.0
SCAN TIMING		Slice Thickness	5.0
Number of Echoes	1	Slice Spacing	5.0
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
		OTHERS	
		Protocol Notes	<i>This protocol is built based on Express coil suite. Please select the appropriate coil which is available in your site and optimize the parameters accordingly.</i>

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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	AX DWI	FOV	24.0
SCAN TIMING		Slice Thickness	5.0
TE	Minimum	Slice Spacing	1.0
Number of Echoes	1	ACQ TIMING	
TR	6188.0	Freq	128
Number of Shots	1	Phase	160
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 CV0	1.00
Slice Order	Interleaved	User CV1	1.00
View Order	Bottom/Up	User CV5	1.00
# of Repetitions REST	0	User CV7	1.00
# of Repetitions ACTIVE	0	User CV17	1.00
SAT		TR Min	4000.0
Tag Type	None	TR Max	8000.0
TRICKS		MULTI-PHASE	
Pause On/Off	On	Seperate Series	0
Auto Subtract	0	Mask Phase	0
Auto SCIC	2	Mask Pause	0
		DIFFUSION	
		Optimized TE	Yes
		Diffusion Directions	All
		Number of Diffusion Directions	3
		Number of T2 Images	1
		Dual Spin Echo	Off
		Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

AX DWI

AX DWI

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	FC, EDR, TRF, Fast, ZIP512, MRF, T2flair
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T2 FLAIR	FOV	24.0
SCAN TIMING		Slice Thickness	5.0
Flip Angle	160	Slice Spacing	1.0
TE	120.0	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	9000.0	Phase	192
TI	2360	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (A)
IMAGE ENHANCE		NEX	1.00
Filter Choice	None	Auto Shim	Auto
GATING/TRIGGER		Phase Correction	Yes
Auto Trigger Type	Off	Flow Direction Compensation	Slice
FMRI		USER CVS	
PSD Trigger	Internal	User CV3	2.00
Slice Order	Interleaved	User CV11	1.00
View Order	Bottom/Up	User CV21	1.00
# of Repetitions REST	0	MULTI-PHASE	
# of Repetitions ACTIVE	0	Seperate Series	0
SAT		Mask Phase	0
SAT Location	S	Mask Pause	0
SAT Location	I	DIFFUSION	
Tag Type	None	Recon All Images	On
TRICKS		CONTRAST	
Pause On/Off	On	Contrast Yes/No	No
Auto Subtract	0		
Auto SCIC	2		

Ax T2 FLAIR

Ax T2 FLAIR

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Ax T2 PROP	PATIENT POSITION		IMAGING PARAMETERS	
	Coil Configuration	8HRBRAIN	Gradient Mode	NA
	Plane	Oblique	SCAN RANGE	
	SCAN TIMING		FOV	24.0cm
	Flip Angle	160.0Degrees	Slice Thickness	5.0mm
	TE	84.576ms	Slice Spacing	1.0mm
	TR	4.732s	MRECHO	
	Echo Train Length	24	Gating Disable	true
	Receiver Bandwidth	62.5KHz		
	ACQ TIMING			
	Freq	320		
	Phase	40		
	Freq DIR	A/P		
	Fat Shift DIR	Normal (A)		
NEX	3.0			
Phase FOV	24.0cm			

Ax T2 PROP

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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	EDR
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T2* GRE	FOV	24.0
SCAN TIMING		Slice Thickness	5.0
Flip Angle	25	Slice Spacing	1.0
TE	15.0	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	584.0	Phase	192
Receiver Bandwidth	19.23	Freq DIR	A/P
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	TR Min	200.0
Slice Order	Interleaved	TR Max	11000.0
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	
TRICKS		Recon All Images	On
Pause On/Off	On	CONTRAST	
Auto Subtract	0	Contrast Yes/No	No
Auto SCIC	2		

Ax T2* GRE

Ax T2* GRE

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AX 3D BRAVO	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	BRAVO
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, ZIP2, ARC, IrP
	Plane	AXIAL	SCAN RANGE	
	Series Description	AX 3D BRAVO	FOV	25.6
	SCAN TIMING		Slice Thickness	2.0
	Flip Angle	12	Location per Slab	90
	Number of Echoes	1	Overlap Locations	0
	TI	450	ACQ TIMING	
	Receiver Bandwidth	31.25	Freq	256
	IMAGE ENHANCE		Phase	256
	Filter Choice	None	Freq DIR	A/P
	GATING/TRIGGER		NEX	1.00
	Auto Trigger Type	Off	Phase FOV	1.00
	MULTI-PHASE		Auto Shim	Auto
	Seperate Series	0	Phase Correction	No
	Trigger Delay without AV	0	FMRI	
	Mask Phase	0	PSD Trigger	Internal
	Mask Pause	0	Slice Order	Interleaved
	DIFFUSION		View Order	Bottom/Up
	Recon All Images	On	# of Repetitions REST	0
	CONTRAST		# of Repetitions ACTIVE	0
	Contrast Yes/No	No	SAT	
			Tag Type	None
		TRICKS		
		Pause On/Off	On	
		Auto Subtract	0	
		Auto SCIC	Off	
		OTHERS		
		Protocol Notes	Do not use IR prepared with post contrast series. IR Prepared defaults to an on state. For optimum image quality, it is critical that IR prep remain on for non-contrast enhanced series.	

AX 3D BRAVO

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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	Fast, SS
Plane	OBLIQUE	SCAN RANGE	
Series Description	---CONTRAST---	FOV	22.0
SCAN TIMING		Slice Thickness	5.0
TE	Minimum	Slice Spacing	1.0
TR	Minimum	ACQ TIMING	
Receiver Bandwidth	83.33	Freq	128
IMAGE ENHANCE		Phase	128
Filter Choice	None	Freq DIR	A/P
GATING/TRIGGER		NEX	1.0
Auto Trigger Type	Off	# of Acq. Before Pause	0
FMRI		Phase FOV	1.00
PSD Trigger	Internal	Auto Shim	Auto
Slice Order	Interleaved	Phase Correction	No
View Order	Bottom/Up	USER CVS	
# of Repetitions REST	0	User CV2	240.00
# of Repetitions ACTIVE	0	User CV13	1.00
SAT		TR Min	0.0
Tag Type	None	TR Max	0.0
TRICKS		MULTI-PHASE	
Pause On/Off	On	Seperate Series	0
Auto Subtract	0	Mask Phase	0
Auto SCIC	Off	Mask Pause	0
		DIFFUSION	
		Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

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AX 3D BRAVO +C	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	BRAVO
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, ZIP2, ARC, IrP
	Plane	AXIAL	SCAN RANGE	
	Series Description	AX 3D BRAVO +C	FOV	25.6
	SCAN TIMING		Slice Thickness	2.0
	Flip Angle	12	Location per Slab	90
	Number of Echoes	1	Overlap Locations	0
	TI	450	ACQ TIMING	
	Receiver Bandwidth	31.25	Freq	256
	IMAGE ENHANCE		Phase	256
	Filter Choice	None	Freq DIR	A/P
	GATING/TRIGGER		NEX	1.00
	Auto Trigger Type	Off	Phase FOV	1.00
	MULTI-PHASE		Auto Shim	Auto
	Seperate Series	0	Phase Correction	No
	Trigger Delay without AV	0	FMRI	
	Mask Phase	0	PSD Trigger	Internal
	Mask Pause	0	Slice Order	Interleaved
	DIFFUSION		View Order	Bottom/Up
	Recon All Images	On	# of Repetitions REST	0
	CONTRAST		# of Repetitions ACTIVE	0
	Contrast Yes/No	Yes	SAT	
			Tag Type	None
		TRICKS		
		Pause On/Off	On	
		Auto Subtract	0	
		Auto SCIC	Off	
		OTHERS		
		Protocol Notes	Do not use IR prepared with post contrast series. IR Prepared defaults to an on state. For optimum image quality, it is critical that IR prep remain on for non-contrast enhanced series.	

AX 3D BRAVO +C

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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	FC, EDR, TRF, Fast, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T1 FSE +C	FOV	24.0
SCAN TIMING		Slice Thickness	5.0
Flip Angle	160	Slice Spacing	1.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	526.0	Phase	192
Echo Train Length	2	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (A)
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	No
PSD Trigger	Internal	Flow Direction Compensation	Slice
Slice Order	Interleaved	USER CVS	
View Order	Bottom/Up	TR Min	350.0
# of Repetitions REST	0	TR Max	750.0
# of Repetitions ACTIVE	0	MULTI-PHASE	
SAT		Seperate Series	0
SAT Location	I	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	Yes

Ax T1 FSE +C

Ax T1 FSE +C