

McLeod Pavilion

Protocol: adult_head_Brain Pediatric Wip

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Spin Echo
Coil Configuration	Head;Neck	Imaging Options	Seq, EDR, TRF, Fast, SS, ARC
Plane	3-PLANE		
Series Description	3-Plane Localizer		
SCAN TIMING		SCAN RANGE	
TE	80.0	FOV	30.0
Number of Echoes	1	Slice Thickness	10.0
TR	1000.0	Slice Spacing	5.0
Receiver Bandwidth	83.33		
IMAGE ENHANCE		ACQ TIMING	
Filter Choice	None	Freq	256
		Phase	128
GATING/TRIGGER		Freq DIR	Unswap
Auto Trigger Type	Off	# of Acq. Before Pause	0
MULTI-PHASE		Phase FOV	1.00
Seperate Series	0	Auto Shim	Auto
Mask Phase	0	Phase Correction	No
Mask Pause	0	FMRI	
DIFFUSION		PSD Trigger	Internal
Recon All Images	On	Slice Order	Interleaved
CONTRAST		View Order	Bottom/Up
Contrast Yes/No	No	# 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	<p><i>Important Tip:</i> Improve Head SAR performance will be seen with during a brain exam if the SSFSE localizer calculation is lower than 3.2 W/kg Keep the TR at 1000 msec in order to lower SAR estimations</p>

3-Plane Localizer

3-Plane Localizer

WB-SAR: 0.68 Head-SAR: 2.0

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	Head;Neck	Imaging Options	Seq, EDR, TRF, Fast, Asset, T1flair
Plane	OBLIQUE		
Series Description	Sag T1 FLAIR		
SCAN TIMING		SCAN RANGE	
Flip Angle	111	FOV	23.0
TE	24.0	Slice Thickness	4.0
Number of Echoes	1	Slice Spacing	1.5
TR	1882.8		
TI	664	ACQ TIMING	
Echo Train Length	8	Freq	300
Receiver Bandwidth	50.00	Phase	256
		Freq DIR	S/I
IMAGE ENHANCE		Fat Shift DIR	Normal (S)
Filter Choice	G	NEX	2.00
		Phase FOV	1.00
GATING/TRIGGER		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	No
		USER CVS	
FMRI		User CV12	1.00
PSD Trigger	Internal	User CV22	1.00
Slice Order	Interleaved		
View Order	Bottom/Up	MULTI-PHASE	
# of Repetitions REST	0	Seperate Series	0
# of Repetitions ACTIVE	0	Mask Phase	0
		Mask Pause	0
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
TRICKS		CONTRAST	
Pause On/Off	On	Contrast Yes/No	No
Auto Subtract	0		
Auto SCIC	2		
OTHERS			
Protocol Notes	<p><i>Important Tip: ASSET factor of 1 is used to reduce phase wrap during this scan. Please do not increase this factor or phase wrap will occur.</i></p>		

Sag T1 FLAIR

Sag T1 FLAIR

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Spin Echo
Coil Configuration	Head;Neck	Imaging Options	EDR, EPI, DIFF, Asset
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax DWI ALL B-1000	FOV	24.0
SCAN TIMING		Slice Thickness	4.0
TE	Minimum	Slice Spacing	0.4
Number of Echoes	1	ACQ TIMING	
TR	7205.0	Freq	120
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 CV5	1.00
View Order	Bottom/Up	User CV17	1.00
# of Repetitions REST	0	TR Min	2000.0
# of Repetitions ACTIVE	0	TR Max	17000.0
SAT		MULTI-PHASE	
Tag Type	None	Seperate Series	0
TRICKS		Mask Phase	0
Pause On/Off	On	Mask Pause	0
Auto Subtract	0	DIFFUSION	
Auto SCIC	2	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 ALL B-1000

Ax DWI ALL B-1000

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	PROPELLER
Coil Configuration	Head;Neck	Imaging Options	EDR, TRF, Fast, ARC
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T2 PROPELLER	FOV	24.0
SCAN TIMING		Slice Thickness	4.0
Flip Angle	142	Slice Spacing	1.5
Number of Echoes	1	ACQ TIMING	
TR	6888.0	Freq	380
Echo Train Length	32	Freq DIR	A/P
Receiver Bandwidth	50.00	Fat Shift DIR	Normal (A)
IMAGE ENHANCE		NEX	2.00
Filter Choice	None	Auto Shim	Auto
GATING/TRIGGER		Phase Correction	No
Auto Trigger Type	Off	USER CVS	
FMRI		User CV5	1.00
PSD Trigger	Internal	TR Min	3000.0
Slice Order	Interleaved	TR Max	10000.0
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 PROPELLER

Ax T2 PROPELLER

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	Head;Neck	Imaging Options	EDR, TRF, Fast, ARC, T2flair
Plane	OBLIQUE		
Series Description	Ax T2 FLAIR		
SCAN TIMING		SCAN RANGE	
Flip Angle	160	FOV	24.0
TE	140.0	Slice Thickness	4.0
Number of Echoes	1	Slice Spacing	1.5
TR	12000.0		
TI	2711	ACQ TIMING	
Echo Train Length	21	Freq	260
Receiver Bandwidth	41.67	Phase	200
IMAGE ENHANCE		Freq DIR	A/P
Filter Choice	G	Fat Shift DIR	Normal (A)
GATING/TRIGGER		NEX	1.00
Auto Trigger Type	Off	Phase FOV	1.00
FMRI		Auto Shim	On
PSD Trigger	Internal	Phase Correction	No
Slice Order	Interleaved	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	On	Contrast Yes/No	No

Ax T2 FLAIR

Ax T2 FLAIR

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Ax T1 PROPELLER	PATIENT POSITION		IMAGING PARAMETERS		Ax T1 PROPELLER
	Patient Entry	Head First	Imaging Mode	2D	
	Patient Position	Supine	Pulse Sequence	PROPELLER	
	Coil Configuration	Head;Neck	Imaging Options	EDR, TRF, Fast, ARC	
	Plane	OBLIQUE	SCAN RANGE		
	Series Description	Ax T1 PROPELLER	FOV	24.0	
	SCAN TIMING		Slice Thickness	4.0	
	Flip Angle	111	Slice Spacing	1.5	
	Number of Echoes	1	ACQ TIMING		
	TR	701.0	Freq	260	
	Echo Train Length	5	Freq DIR	A/P	
	Receiver Bandwidth	41.67	Fat Shift DIR	Normal (A)	
	IMAGE ENHANCE		NEX	2.50	
	Filter Choice	None	# of Acq. Before Pause	0	
	GATING/TRIGGER		Auto Shim	Auto	
	Auto Trigger Type	Off	Phase Correction	No	
	FMRI		USER CVS		
	PSD Trigger	Internal	User CV5	1.00	
	Slice Order	Interleaved	User CV16	1.00	
	View Order	Bottom/Up	TR Min	500.0	
	# of Repetitions REST	0	TR Max	950.0	
	# of Repetitions ACTIVE	0	MULTI-PHASE		
	SAT		Seperate Series	0	
	Tag Type	None	Mask Phase	0	
	TRICKS		Mask Pause	0	
	Pause On/Off	On	DIFFUSION		
	Auto Subtract	0	Recon All Images	On	
	Auto SCIC	2	CONTRAST		
		Contrast Yes/No	No		

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	Head;Neck	Imaging Options	Seq, EDR, TRF, Fast, T1flair
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T1 FLAIR	FOV	24.0
SCAN TIMING		Slice Thickness	4.0
Flip Angle	111	Slice Spacing	1.5
TE	24.0	ACQ TIMING	
Number of Echoes	1	Freq	300
TR	2549.3	Phase	260
TI	801	Freq DIR	A/P
Echo Train Length	8	Fat Shift DIR	Normal (A)
Receiver Bandwidth	41.67	NEX	2.00
IMAGE ENHANCE		Phase FOV	1.00
Filter Choice	G	Auto Shim	Auto
GATING/TRIGGER		Phase Correction	No
Auto Trigger Type	Off	USER CVS	
FMRI		User CV12	1.00
PSD Trigger	Internal	User CV22	1.00
Slice Order	Interleaved	MULTI-PHASE	
View Order	Bottom/Up	Seperate Series	0
# of Repetitions REST	0	Mask Phase	0
# of Repetitions ACTIVE	0	Mask Pause	0
SAT		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 T1 FLAIR

Ax T1 FLAIR

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	Head;Neck	Imaging Options	EDR, TRF, Fast
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T1 FSE Optimized	FOV	24.0
SCAN TIMING		Slice Thickness	4.0
Flip Angle	111	Slice Spacing	1.5
TE	11.0	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	750.0	Phase	260
Echo Train Length	3	Freq DIR	A/P
Receiver Bandwidth	41.67	Fat Shift DIR	Normal (A)
IMAGE ENHANCE		NEX	1.00
Filter Choice	G	# 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	
Slice Order	Interleaved	User CV16	1.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	750.0
# of Repetitions ACTIVE	0	TR Max	950.0
SAT		MULTI-PHASE	
SAT Location	I	Seperate Series	0
Tag Type	None	Mask Phase	0
TRICKS		Mask Pause	0
Pause On/Off	On	DIFFUSION	
Auto Subtract	0	Recon All Images	On
Auto SCIC	2	CONTRAST	
		Contrast Yes/No	No

Ax T1 FSE Optimized

Ax T1 FSE Optimized

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Gradient Echo
Coil Configuration	Head;Neck	Imaging Options	EDR
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T2* GRE	FOV	24.0
SCAN TIMING		Slice Thickness	4.0
Flip Angle	15	Slice Spacing	1.5
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	380
TR	334.0	Phase	260
Receiver Bandwidth	27.78	Freq DIR	A/P
IMAGE ENHANCE		NEX	2.00
Filter Choice	G	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	On		

Ax T2* GRE

Ax T2* GRE

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	PROPELLER
Coil Configuration	Head;Neck	Imaging Options	EDR, TRF, Fast, ARC
Plane	OBLIQUE	SCAN RANGE	
Series Description	Cor T2 PROPELLER	FOV	24.0
SCAN TIMING		Slice Thickness	4.0
Flip Angle	142	Slice Spacing	1.5
Number of Echoes	1	ACQ TIMING	
TR	6886.0	Freq	380
Echo Train Length	32	Freq DIR	Unswap
Receiver Bandwidth	50.00	Fat Shift DIR	Normal
IMAGE ENHANCE		NEX	2.00
Filter Choice	None	Auto Shim	Auto
GATING/TRIGGER		Phase Correction	No
Auto Trigger Type	Off	USER CVS	
FMRI		User CV5	1.00
PSD Trigger	Internal	TR Min	3000.0
View Order	Bottom/Up	TR Max	10000.0
# 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

Cor T2 PROPELLER

Cor T2 PROPELLER

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3D Ax T1 BRAVO Seizure	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	BRAVO
	Coil Configuration	Head;Neck;Spine	Imaging Options	EDR, Fast, ZIP512, ZIP2, ARC, IrP
	Plane	AXIAL	SCAN RANGE	
	Series Description	3D Ax T1 BRAVO Seizure	FOV	25.6
	SCAN TIMING		Slice Thickness	1.0
	Flip Angle	12	Location per Slab	120
	Number of Echoes	1	Overlap Locations	0
	TI	450	ACQ TIMING	
	Receiver Bandwidth	31.25	Freq	256
	IMAGE ENHANCE		Phase	256
	Filter Choice	G	Freq DIR	A/P
	GATING/TRIGGER		NEX	1.00
	Auto Trigger Type	Off	Phase FOV	0.80
	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	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	

3D Ax T1 BRAVO Seizure

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Gradient Echo
Coil Configuration	Head;Neck	Imaging Options	Seq, Fast
Plane	3-PLANE	SCAN RANGE	
Series Description	--CONTRAST--	FOV	24.0
SCAN TIMING		Slice Thickness	10.0
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