

Protocol: adult_head_BRAIN PITUITARY

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

Protocol: adult_head_BRAIN PITUITARY

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, FR, ARC, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	Sag T2 frFSE	FOV	24.0
SCAN TIMING		Slice Thickness	5.0
Flip Angle	160	Slice Spacing	1.0
TE	102.0	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	4565.0	Phase	256
Echo Train Length	21	Freq DIR	S/I
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (S)
IMAGE ENHANCE		NEX	2.00
Filter Choice	None	Phase FOV	1.00
GATING/TRIGGER		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	Yes
FMRI		Flow Direction Compensation	Freq
PSD Trigger	Internal	USER CVS	
Slice Order	Interleaved	User CV8	1.00
View Order	Bottom/Up	User CV21	1.00
# of Repetitions REST	0	TR Min	2500.0
# of Repetitions ACTIVE	0	TR Max	5000.0
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	Off	Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

Sag T2 frFSE

Sag T2 frFSE

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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	HD 8Ch High Res Brain Array by Invivo	Imaging Options	FC, EDR, TRF, Fast, ZIP512, T2flair
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T2 FLAIR	FOV	24.0
SCAN TIMING		Slice Thickness	4.0
Flip Angle	160	Slice Spacing	1.5
TE	120.0	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	8770.0	Phase	192
TI	2345	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	TR Min	8000.0
# of Repetitions ACTIVE	0	TR Max	16000.0
SAT		MULTI-PHASE	
SAT Location	S	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	No

Ax T2 FLAIR

Ax T2 FLAIR

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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	484.0	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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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	Seq, EDR, TRF, Fast, ZIP512, Asset, T1flair
Plane	OBLIQUE	SCAN RANGE	
Series Description	AX T1 FLAIR	FOV	24.0
SCAN TIMING		Slice Thickness	4.0
Flip Angle	160	Slice Spacing	1.5
TE	24.0	ACQ TIMING	
Number of Echoes	1	Freq	260
TR	2814.3	Phase	212
TI	940	Freq DIR	A/P
Echo Train Length	8	Fat Shift DIR	Normal (A)
Receiver Bandwidth	31.25	NEX	1.00
IMAGE ENHANCE		Phase FOV	1.00
Filter Choice	C	Auto Shim	Auto
GATING/TRIGGER		Phase Correction	No
Auto Trigger Type	Off	USER CVS	
FMRI		User CV12	1.00
PSD Trigger	Internal	TR Min	1750.0
Slice Order	Interleaved	TR Max	3500.0
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	Off		

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	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, TRF, Fast, ARC
Plane	OBLIQUE	SCAN RANGE	
Series Description	COR T1 FSE 3mm	FOV	18.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	0.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	530.0	Phase	224
Echo Train Length	2	Freq DIR	S/I
Receiver Bandwidth	20.83	Fat Shift DIR	Normal (I)
IMAGE ENHANCE		NEX	3.00
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 CV22	1.00
Slice Order	Interleaved	TR Min	500.0
View Order	Bottom/Up	TR Max	700.0
# 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 T1 FSE 3mm

COR T1 FSE 3mm

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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, FR, ARC
Plane	OBLIQUE	SCAN RANGE	
Series Description	Cor T2 frFSE 3mm	FOV	18.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	0.0
TE	120.0	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	3771.0	Phase	224
Echo Train Length	19	Freq DIR	S/I
Receiver Bandwidth	22.73	Fat Shift DIR	Normal (I)
IMAGE ENHANCE		NEX	4.00
Filter Choice	None	Phase FOV	1.00
GATING/TRIGGER		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	No
FMRI		Flow Direction Compensation	Freq
PSD Trigger	Internal	USER CVS	
Slice Order	Interleaved	User CV7	1.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	2000.0
# of Repetitions ACTIVE	0	TR Max	10000.0
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	Off	Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

Cor T2 frFSE 3mm

Cor T2 frFSE 3mm

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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	EDR, TRF, Fast, ARC
Plane	OBLIQUE	SCAN RANGE	
Series Description	SAG T1 FSE 3mm	FOV	18.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	0.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	530.0	Phase	224
Echo Train Length	2	Freq DIR	S/I
Receiver Bandwidth	20.83	Fat Shift DIR	Normal (I)
IMAGE ENHANCE		NEX	3.00
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 CV22	1.00
Slice Order	Interleaved	TR Min	500.0
View Order	Bottom/Up	TR Max	700.0
# 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

SAG T1 FSE 3mm

SAG T1 FSE 3mm

Protocol: adult_head_BRAIN PITUITARY

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

Protocol: adult_head_BRAIN PITUITARY

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	+C 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
TRICKS		View Order	Bottom/Up
Pause On/Off	On	# of Repetitions REST	0
Auto Subtract	0	# of Repetitions ACTIVE	0
Auto SCIC	Off	DIFFUSION	
		Recon All Images	On
		CONTRAST	
		Contrast Yes/No	Yes

+C AX 3D BRAVO

+C AX 3D BRAVO

Protocol: adult_head_BRAIN PITUITARY

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	TRF, Fast
Plane	OBLIQUE	SCAN RANGE	
Series Description	+C Ax T1	FOV	25.0
SCAN TIMING		Slice Thickness	4.0
Flip Angle	160	Slice Spacing	1.5
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	518.0	Phase	224
Echo Train Length	3	Freq DIR	A/P
Receiver Bandwidth	20.83	Fat Shift DIR	Normal (A)
IMAGE ENHANCE		NEX	2.00
Filter Choice	None	# of Acq. Before Pause	0
GATING/TRIGGER		Phase FOV	0.75
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	No
PSD Trigger	Internal	USER CVS	
Slice Order	Interleaved	User CV22	1.00
View Order	Bottom/Up	TR Min	500.0
# of Repetitions REST	0	TR Max	700.0
# 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	Off	CONTRAST	
		Contrast Yes/No	Yes

+C Ax T1

+C Ax T1

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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	EDR, TRF, Fast, ARC
Plane	OBLIQUE	SCAN RANGE	
Series Description	+C COR T1 F/S 3mm	FOV	18.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	0.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	500.0	Phase	224
Echo Train Length	2	Freq DIR	S/I
Receiver Bandwidth	20.83	Fat Shift DIR	Normal (I)
IMAGE ENHANCE		NEX	3.00
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	USER CVS	
Slice Order	Interleaved	User CV19	1.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	500.0
# of Repetitions ACTIVE	0	TR Max	700.0
SAT		MULTI-PHASE	
Tag Type	None	Seperate Series	0
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	2	CONTRAST	
		Contrast Yes/No	No

+C COR T1 F/S 3mm

+C COR T1 F/S 3mm

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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	EDR, TRF, Fast, ARC
Plane	OBLIQUE	SCAN RANGE	
Series Description	+C SAG T1 F/S 3mm	FOV	18.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	0.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	500.0	Phase	224
Echo Train Length	2	Freq DIR	S/I
Receiver Bandwidth	20.83	Fat Shift DIR	Normal (I)
IMAGE ENHANCE		NEX	3.00
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	USER CVS	
Slice Order	Interleaved	User CV19	1.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	500.0
# of Repetitions ACTIVE	0	TR Max	700.0
SAT		MULTI-PHASE	
Tag Type	None	Seperate Series	0
Fat/Water Saturation	Fat	Mask Phase	0
		Mask Pause	0
TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	CONTRAST	
Auto SCIC	2	Contrast Yes/No	No

+C SAG T1 F/S 3mm

+C SAG T1 F/S 3mm