

Protocol: adult_neck_BRACHIAL PLEXUS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Gradient Echo
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe, Chest, TL)	Imaging Options	NPW, Seq, Fast
Plane	3-PLANE	SCAN RANGE	
Series Description	LOC	FOV	40.0
SCAN TIMING		Slice Thickness	4.0
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	2.00
Seperate Series	0	Phase FOV	1.00
Mask Phase	0	Auto Shim	Off
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 optimizing the parameters accordingly</i>

Protocol: adult_neck_BRACHIAL PLEXUS

COR T1	PATIENT POSITION		IMAGING PARAMETERS		COR T1
	Patient Entry	Head First	Imaging Mode	2D	
	Patient Position	Supine	Pulse Sequence	FSE-XL	
	Coil Configuration	HNS by GE (PosteriorHead, Horseshoe, Chest, TL)	Imaging Options	NPW, EDR, TRF, Fast, ARC, MRF	
	Plane	OBLIQUE	SCAN RANGE		
	Series Description	COR T1	FOV	28.0	
	SCAN TIMING		Slice Thickness	3.0	
	Flip Angle	160	Slice Spacing	1.0	
	TE	Min Full	ACQ TIMING		
	Number of Echoes	1	Freq	320	
	TR	478.0	Phase	224	
	Echo Train Length	4	Freq DIR	S/I	
	Receiver Bandwidth	41.67	Fat Shift DIR	Normal (I)	
	IMAGE ENHANCE		NEX	2.00	
	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 CV15	2.00	
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	Off	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	HNS by GE (PosteriorHead, Horseshoe, Chest, TL)	Imaging Options	FC, NPW, Seq, EDR, TRF, Fast, ARC, MRF, IrP
Plane	OBLIQUE	PSD Name	frfse-xl
Series Description	COR STIR	SCAN RANGE	
SCAN TIMING		FOV	28.0
Flip Angle	160	Slice Thickness	3.0
TE	42.0	Slice Spacing	1.0
Number of Echoes	1	ACQ TIMING	
TR	8675.0	Freq	288
TI	140	Phase	192
Echo Train Length	13	Freq DIR	S/I
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (I)
IMAGE ENHANCE		NEX	2.00
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 CV21	1.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	3500.0
# of Repetitions ACTIVE	0	TR Max	15000.0
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 STIR

COR STIR

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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, Horseshoe, Chest, TL)	Imaging Options	NPW, EDR, TRF, Fast, ARC, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	SAG T1	FOV	28.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	1.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	405.0	Phase	224
Echo Train Length	4	Freq DIR	A/P
Receiver Bandwidth	41.67	Fat Shift DIR	Normal (P)
IMAGE ENHANCE		NEX	2.00
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 CV15	2.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	300.0
# of Repetitions ACTIVE	0	TR Max	750.0
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	Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

SAG T1

SAG T1

Protocol: adult_neck_BRACHIAL PLEXUS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe, Chest, TL)	Imaging Options	FC, NPW, EDR, TRF, Fast, ARC, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	SAG T2 FS	FOV	20.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	1.0
TE	85.0	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	8279.0	Phase	192
Echo Train Length	20	Freq DIR	R/L
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (L)
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		Flow Direction Compensation	Slice
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	2000.0
# of Repetitions ACTIVE	0	TR Max	10000.0
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	Off	CONTRAST	
		Contrast Yes/No	No

SAG T2 FS

SAG T2 FS

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Sag FIESTA	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	Fiesta
	Coil Configuration	HNS by GE (PosteriorHead, Horseshoe, Chest, TL)	Imaging Options	Seq, Fast, ZIP512
	Plane	SAGITTAL	SCAN RANGE	
	Series Description	Sag FIESTA	FOV	28.0
	SCAN TIMING		Slice Thickness	3.0
	Flip Angle	45	Slice Spacing	1.0
	TE	Minimum	ACQ TIMING	
	Number of Echoes	1	Freq	192
	Receiver Bandwidth	83.33	Phase	224
	IMAGE ENHANCE		Freq DIR	S/I
	Filter Choice	None	NEX	2.00
	GATING/TRIGGER		# of Acq. Before Pause	0
	Auto Trigger Type	Off	Phase FOV	1.00
	MULTI-PHASE		Auto Shim	Auto
	Seperate Series	0	Phase Correction	No
	Mask Phase	0	FMRI	
	Mask Pause	0	PSD Trigger	Internal
	DIFFUSION		Slice Order	Interleaved
	Recon All Images	On	View Order	Bottom/Up
	CONTRAST		# of Repetitions REST	0
	Contrast Yes/No	No	# of Repetitions ACTIVE	0
			SAT	
			Tag Type	None
		TRICKS		
		Pause On/Off	On	
		Auto Subtract	0	
		Auto SCIC	Off	

Sag FIESTA

Protocol: adult_neck_BRACHIAL PLEXUS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	3D
Patient Position	Supine	Pulse Sequence	Cube
Coil Configuration	HD TRknee PA	Imaging Options	EDR, Fast, ZIP512, ZIP2, FR, MRF
Plane	OBLIQUE		
Series Description	3D Sag T1 Cube		
SCAN TIMING		SCAN RANGE	
TE	Minimum	FOV	28.0
Number of Echoes	1	Slice Thickness	1.4
TR	887.0	Location per Slab	84
Echo Train Length	70	Overlap Locations	0
Receiver Bandwidth	41.67		
IMAGE ENHANCE		ACQ TIMING	
Filter Choice	None	Freq	224
		Phase	224
		Freq DIR	Unswap
		NEX	1.00
		Phase FOV	1.00
		Auto Shim	Auto
		Phase Correction	No
GATING/TRIGGER		USER CVS	
Auto Trigger Type	Off	User CV12	70.00
		User CV22	1.00
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		
# of Repetitions ACTIVE	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>Tips: -For optimal image quality, it is recommended to cover all anatomy in the left/right direction. -For optimal image quality, it is recommended: A. to position the scanned knee to ISO center as close as possible. B. to decrease BW more if the anatomy is far from ISO center. The tradeoff is blurring images.</p>		

3D Sag T1 Cube

3D Sag T1 Cube

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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, Horseshoe, Chest, TL)	Imaging Options	NPW, EDR, TRF, Fast, ARC, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	AX T1	FOV	24.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	1.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	512
TR	633.0	Phase	224
Echo Train Length	3	Freq DIR	R/L
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (L)
IMAGE ENHANCE		NEX	2.00
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 CV15	2.00
View Order	Bottom/Up	User CV21	1.00
# of Repetitions REST	0	User CV22	1.00
# of Repetitions ACTIVE	0	TR Min	300.0
SAT		TR Max	750.0
Tag Type	None	MULTI-PHASE	
TRICKS		Seperate Series	0
Pause On/Off	On	Mask Phase	0
Auto Subtract	0	Mask Pause	0
Auto SCIC	Off	DIFFUSION	
		Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

AX T1

AX T1

Protocol: adult_neck_BRACHIAL PLEXUS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe, Chest, TL)	Imaging Options	FC, NPW, EDR, TRF, Fast, ARC, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	AX T2 FS	FOV	24.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	1.0
TE	85.0	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	8152.0	Phase	192
Echo Train Length	20	Freq DIR	R/L
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (L)
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		Flow Direction Compensation	Slice
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	2000.0
# of Repetitions ACTIVE	0	TR Max	10000.0
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	Off	CONTRAST	
		Contrast Yes/No	No

AX T2 FS

AX T2 FS

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CONTRAST	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	Gradient Echo
	Coil Configuration	HNS by GE (PosteriorHead, Horseshoe, Chest, TL)	Imaging Options	NPW, Seq, Fast
	Plane	3-PLANE	SCAN RANGE	
	Series Description	*CONTRAST*	FOV	40.0
	SCAN TIMING		Slice Thickness	4.0
	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	2.00
	Seperate Series	0	Phase FOV	1.00
	Mask Phase	0	Auto Shim	Off
	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	This protocol is built based on Express coil suite. Please select the appropriate coil which is available in your site and optimizing the parameters accordingly	

Protocol: adult_neck_BRACHIAL PLEXUS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe, Chest, TL)	Imaging Options	NPW, EDR, TRF, Fast, ARC, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	+C COR T1 FS	FOV	28.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	1.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	478.0	Phase	224
Echo Train Length	4	Freq DIR	S/I
Receiver Bandwidth	41.67	Fat Shift DIR	Normal (I)
IMAGE ENHANCE		NEX	2.00
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 CV15	2.00
View Order	Bottom/Up	User CV19	1.00
# of Repetitions REST	0	User CV22	1.00
# of Repetitions ACTIVE	0	MULTI-PHASE	
SAT		Seperate Series	0
Tag Type	None	Mask Phase	0
Fat/Water Saturation	Fat	Mask Pause	0
TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	CONTRAST	
Auto SCIC	Off	Contrast Yes/No	Yes

+C COR T1 FS

+C COR T1 FS

Protocol: adult_neck_BRACHIAL PLEXUS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe, Chest, TL)	Imaging Options	NPW, EDR, TRF, Fast, ARC, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	+C SAG T1 FS	FOV	28.0
SCAN TIMING		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	1.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	320
TR	710.0	Phase	224
Echo Train Length	4	Freq DIR	A/P
Receiver Bandwidth	41.67	Fat Shift DIR	Normal (P)
IMAGE ENHANCE		NEX	2.00
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 CV15	2.00
View Order	Bottom/Up	User CV19	1.00
# of Repetitions REST	0	User CV22	1.00
# of Repetitions ACTIVE	0	TR Min	300.0
SAT		TR Max	750.0
Tag Type	None	MULTI-PHASE	
Fat/Water Saturation	Fat	Seperate Series	0
TRICKS		Mask Phase	0
Pause On/Off	On	Mask Pause	0
Auto Subtract	0	DIFFUSION	
Auto SCIC	2	Recon All Images	On
		CONTRAST	
		Contrast Yes/No	Yes

+C SAG T1 FS

+C SAG T1 FS

Protocol: adult_neck_BRACHIAL PLEXUS

+CAX T1 FS	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	FSE-XL
	Coil Configuration	HNS by GE (PosteriorHead, Horseshoe, Chest, TL)	Imaging Options	NPW, EDR, TRF, Fast, ARC, MRF
	Plane	OBLIQUE	SCAN RANGE	
	Series Description	+C AX T1 FS	FOV	24.0
	SCAN TIMING		Slice Thickness	3.0
	Flip Angle	160	Slice Spacing	1.0
	TE	Min Full	ACQ TIMING	
	Number of Echoes	1	Freq	512
	TR	511.0	Phase	224
	Echo Train Length	3	Freq DIR	R/L
	Receiver Bandwidth	31.25	Fat Shift DIR	Normal (L)
	IMAGE ENHANCE		NEX	2.00
	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 CV15	2.00
	View Order	Bottom/Up	User CV19	1.00
	# of Repetitions REST	0	User CV21	1.00
	# of Repetitions ACTIVE	0	User CV22	1.00
	SAT		TR Min	300.0
	Tag Type	None	TR Max	750.0
Fat/Water Saturation	Fat	MULTI-PHASE		
TRICKS		Seperate Series	0	
Pause On/Off	On	Mask Phase	0	
Auto Subtract	0	Mask Pause	0	
Auto SCIC	Off	DIFFUSION		
		Recon All Images	On	
		CONTRAST		
		Contrast Yes/No	Yes	

+CAX T1 FS