

Protocol: adult\_spine\_THORACIC

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, TL)	Imaging Options	NPW, Seq, Fast
Plane	3-PLANE	<b>SCAN RANGE</b>	
Series Description	LOC	FOV	48.0
<b>SCAN TIMING</b>		Slice Thickness	5.0
Number of Echoes	1	Slice Spacing	5.0
<b>IMAGE ENHANCE</b>		<b>ACQ TIMING</b>	
Filter Choice	None	Freq	256
<b>GATING/TRIGGER</b>		Phase	128
Auto Trigger Type	Off	Freq DIR	Unswap
<b>MULTI-PHASE</b>		NEX	2.00
Seperate Series	0	Phase FOV	1.00
Mask Phase	0	Auto Shim	Off
Mask Pause	0	Phase Correction	No
<b>DIFFUSION</b>		<b>FMRI</b>	
Recon All Images	On	PSD Trigger	Internal
<b>CONTRAST</b>		Slice Order	Interleaved
Contrast Yes/No	No	View Order	Bottom/Up
		# of Repetitions REST	0
		# of Repetitions ACTIVE	0
		<b>SAT</b>	
		Tag Type	None
		<b>TRICKS</b>	
		Pause On/Off	On
		Auto Subtract	0
		Auto SCIC	Off

Protocol: adult\_spine\_THORACIC

LOC 512	<b>PATIENT POSITION</b>		<b>IMAGING PARAMETERS</b>		LOC 512
	Patient Entry	Head First	Imaging Mode	2D	
	Patient Position	Supine	Pulse Sequence	Gradient Echo	
	Coil Configuration	HNS by GE (PosteriorHead, Horseshoe, TL)	Imaging Options	Seq, Fast	
	<b>SCAN TIMING</b>		<b>SCAN RANGE</b>		
	Plane	3-PLANE	FOV	48.0	
	Series Description	LOC 512	Slice Thickness	5.0	
	Number of Echoes	1	Slice Spacing	10.0	
	<b>IMAGE ENHANCE</b>		<b>ACQ TIMING</b>		
	Filter Choice	None	Freq	512	
	<b>GATING/TRIGGER</b>		Phase	256	
	Auto Trigger Type	Off	Freq DIR	Unswap	
	<b>MULTI-PHASE</b>		NEX	1.00	
	Seperate Series	0	Phase FOV	1.00	
	Mask Phase	0	Auto Shim	Off	
	Mask Pause	0	Phase Correction	No	
	<b>DIFFUSION</b>		<b>FMRI</b>		
	Recon All Images	On	PSD Trigger	Internal	
	<b>CONTRAST</b>		Slice Order	Interleaved	
	Contrast Yes/No	No	View Order	Bottom/Up	
			# of Repetitions REST	0	
			# of Repetitions ACTIVE	0	
			<b>SAT</b>		
			Tag Type	None	
			<b>TRICKS</b>		
		Pause On/Off	On		
		Auto Subtract	0		
		Auto SCIC	Off		

Protocol: adult\_spine\_THORACIC

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, TL)	Imaging Options	FC, NPW, EDR, TRF, Fast, FR, MRF
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	SAG T2	FOV	36.0
<b>SCAN TIMING</b>		Slice Thickness	4.0
Flip Angle	160	Slice Spacing	1.0
TE	100.0	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	512
TR	3034.0	Phase	256
Echo Train Length	21	Freq DIR	A/P
Receiver Bandwidth	50.00	Fat Shift DIR	Normal (P)
<b>IMAGE ENHANCE</b>		NEX	4.00
Filter Choice	None	Phase FOV	1.00
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	No
<b>FMRI</b>		Flow Direction Compensation	Freq
PSD Trigger	Internal	<b>USER CVS</b>	
Slice Order	Interleaved	User CV15	2.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	2800.0
# of Repetitions ACTIVE	0	TR Max	11000.0
<b>SAT</b>		<b>MULTI-PHASE</b>	
SAT Location	A	Seperate Series	0
SAT Location	S	Mask Phase	0
SAT Location	I	Mask Pause	0
Tag Type	None	<b>DIFFUSION</b>	
<b>TRICKS</b>		Recon All Images	On
Pause On/Off	On	<b>CONTRAST</b>	
Auto Subtract	0	Contrast Yes/No	No
Auto SCIC	2		

SAG T2

SAG T2

Protocol: adult\_spine\_THORACIC

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, TL)	Imaging Options	NPW, EDR, TRF, Fast, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	SAG T1	FOV	36.0
SCAN TIMING		Slice Thickness	4.0
Flip Angle	160	Slice Spacing	1.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	512
TR	452.0	Phase	256
Echo Train Length	3	Freq DIR	A/P
Receiver Bandwidth	50.00	Fat Shift DIR	Normal (P)
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		USER CVS	
PSD Trigger	Internal	User CV15	2.00
Slice Order	Interleaved	User CV21	2.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	350.0
# 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\_spine\_THORACIC

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, TL)	Imaging Options	FC, NPW, Seq, EDR, TRF, Fast, MRF, IrP
Plane	OBLIQUE	PSD Name	frfse-xl
Series Description	SAG STIR	<b>SCAN RANGE</b>	
<b>SCAN TIMING</b>		FOV	36.0
Flip Angle	160	Slice Thickness	4.0
TE	30.0	Slice Spacing	1.0
Number of Echoes	1	<b>ACQ TIMING</b>	
TR	3222.0	Freq	320
TI	140	Phase	224
Echo Train Length	11	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (P)
<b>IMAGE ENHANCE</b>		NEX	4.00
Filter Choice	None	Phase FOV	1.00
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	No
<b>FMRI</b>		Flow Direction Compensation	Freq
PSD Trigger	Internal	<b>USER CVS</b>	
Slice Order	Interleaved	User CV21	1.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	3000.0
# of Repetitions ACTIVE	0	TR Max	15000.0
<b>SAT</b>		<b>MULTI-PHASE</b>	
SAT Location	S	Seperate Series	0
SAT Location	I	Mask Phase	0
Tag Type	None	Mask Pause	0
<b>TRICKS</b>		<b>DIFFUSION</b>	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	<b>CONTRAST</b>	
Auto SCIC	2	Contrast Yes/No	No

SAG STIR

SAG STIR

Protocol: adult\_spine\_THORACIC

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, TL)	Imaging Options	FC, NPW, EDR, TRF, Fast, FR, MRF
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	AX T2 SLAB	FOV	20.0
<b>SCAN TIMING</b>		Slice Thickness	6.0
Flip Angle	160	Slice Spacing	2.0
TE	85.0	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	288
TR	4064.0	Phase	224
Echo Train Length	23	Freq DIR	A/P
Receiver Bandwidth	41.67	Fat Shift DIR	Normal (A)
<b>IMAGE ENHANCE</b>		NEX	4.00
Filter Choice	None	Phase FOV	1.00
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	No
<b>FMRI</b>		Flow Direction Compensation	Slice
PSD Trigger	Internal	<b>USER CVS</b>	
Slice Order	Interleaved	User CV15	2.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	2800.0
# of Repetitions ACTIVE	0	TR Max	6000.0
<b>SAT</b>		<b>MULTI-PHASE</b>	
SAT Location	A	Seperate Series	0
SAT Location	S	Mask Phase	0
SAT Location	I	Mask Pause	0
Tag Type	None	<b>DIFFUSION</b>	
<b>TRICKS</b>		Recon All Images	On
Pause On/Off	On	<b>CONTRAST</b>	
Auto Subtract	0	Contrast Yes/No	No
Auto SCIC	2		

AX T2 SLAB

AX T2 SLAB

Protocol: adult\_spine\_THORACIC

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Spin Echo
Coil Configuration	HNS by GE (PosteriorHead, Horseshoe, TL)	Imaging Options	Fast, SS
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	---OPTIONS---	FOV	22.0
<b>SCAN TIMING</b>		Slice Thickness	5.0
TE	Minimum	Slice Spacing	1.0
TR	Minimum	<b>ACQ TIMING</b>	
Receiver Bandwidth	83.33	Freq	128
<b>IMAGE ENHANCE</b>		Phase	128
Filter Choice	None	Freq DIR	A/P
<b>GATING/TRIGGER</b>		NEX	1.0
Auto Trigger Type	Off	# of Acq. Before Pause	0
<b>FMRI</b>		Phase FOV	1.00
PSD Trigger	Internal	Auto Shim	Auto
Slice Order	Interleaved	Phase Correction	No
View Order	Bottom/Up	<b>USER CVS</b>	
# of Repetitions REST	0	User CV2	240.00
# of Repetitions ACTIVE	0	User CV13	1.00
<b>SAT</b>		TR Min	0.0
Tag Type	None	TR Max	0.0
<b>TRICKS</b>		<b>MULTI-PHASE</b>	
Pause On/Off	On	Seperate Series	0
Auto Subtract	0	Mask Phase	0
Auto SCIC	Off	Mask Pause	0
		<b>DIFFUSION</b>	
		Recon All Images	On
		<b>CONTRAST</b>	
		Contrast Yes/No	No

Protocol: adult\_spine\_THORACIC

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, TL)	Imaging Options	NPW, EDR, TRF, Fast
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T1 FSE	FOV	20.0
SCAN TIMING		Slice Thickness	6.0
Flip Angle	160	Slice Spacing	2.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	500.0	Phase	224
Echo Train Length	2	Freq DIR	Swap
Receiver Bandwidth	20.83	Fat Shift DIR	Normal
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		USER CVS	
PSD Trigger	Internal	User CV7	1.00
Slice Order	Interleaved	User CV15	2.00
View Order	Bottom/Up	User CV17	1.00
# of Repetitions REST	0	User CV22	1.00
# of Repetitions ACTIVE	0	MULTI-PHASE	
SAT		Seperate Series	0
SAT Location	A	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	Prescribe anterior sat		

Ax T1 FSE

Ax T1 FSE



Protocol: adult\_spine\_THORACIC

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, TL)	Imaging Options	NPW, EDR, TRF, Fast
Plane	OBLIQUE	SCAN RANGE	
Series Description	+C Ax T1 FSE F/S	FOV	20.0
SCAN TIMING		Slice Thickness	6.0
Flip Angle	160	Slice Spacing	2.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	500.0	Phase	224
Echo Train Length	2	Freq DIR	Swap
Receiver Bandwidth	20.83	Fat Shift DIR	Normal
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		USER CVS	
PSD Trigger	Internal	User CV7	1.00
Slice Order	Interleaved	User CV15	2.00
View Order	Bottom/Up	User CV17	1.00
# of Repetitions REST	0	User CV19	1.00
# of Repetitions ACTIVE	0	User CV22	1.00
SAT		MULTI-PHASE	
SAT Location	A	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	2	Contrast Yes/No	Yes
OTHERS			
Protocol Notes	Prescribe anterior sat		

+C Ax T1 FSE F/S

+C Ax T1 FSE F/S

Protocol: adult\_spine\_THORACIC

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, TL)	Imaging Options	NPW, EDR, TRF, Fast, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	+C Sag T1 FSE F/S	FOV	36.0
SCAN TIMING		Slice Thickness	4.0
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	Swap
Receiver Bandwidth	27.78	Fat Shift DIR	Normal
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 CV15	2.00
View Order	Bottom/Up	User CV19	1.00
# of Repetitions REST	0	User CV21	2.00
# of Repetitions ACTIVE	0	User CV22	1.00
SAT		MULTI-PHASE	
SAT Location	A	Seperate Series	0
SAT Location	S	Mask Phase	0
SAT Location	I	Mask Pause	0
Tag Type	None	DIFFUSION	
Fat/Water Saturation	Fat	Recon All Images	On
TRICKS		CONTRAST	
Pause On/Off	On	Contrast Yes/No	Yes
Auto Subtract	0		
Auto SCIC	2		

+C Sag T1 FSE F/S

+C Sag T1 FSE F/S