

Protocol: adult_spine_LUMBAR

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Gradient Echo
Coil Configuration	HNS by GE (TL)	Imaging Options	Seq, Fast
Plane	3-PLANE	SCAN RANGE	
Series Description	LOC	FOV	44.0
SCAN TIMING		Slice Thickness	7.0
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	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

LOC

LOC

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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 (TL)	Imaging Options	FC, NPW, EDR, TRF, Fast, FR, MRF
Plane	OBLIQUE		
Series Description	SAG T2		
SCAN TIMING		SCAN RANGE	
Flip Angle	160	FOV	28.0
TE	80.0	Slice Thickness	4.0
Number of Echoes	1	Slice Spacing	1.0
TR	2800.0		
Echo Train Length	18	ACQ TIMING	
Receiver Bandwidth	31.25	Freq	300
		Phase	224
		Freq DIR	A/P
		Fat Shift DIR	Normal (P)
		NEX	4.00
		Phase FOV	1.00
		Auto Shim	Auto
		Phase Correction	No
		Flow Direction Compensation	Freq
IMAGE ENHANCE		USER CVS	
Filter Choice	None	User CV15	2.00
		User CV22	1.00
		TR Min	2800.0
		TR Max	11000.0
GATING/TRIGGER		MULTI-PHASE	
Auto Trigger Type	Off	Seperate Series	0
		Mask Phase	0
		Mask Pause	0
FMRI		DIFFUSION	
PSD Trigger	Internal	Recon All Images	On
Slice Order	Interleaved		
View Order	Bottom/Up	CONTRAST	
# of Repetitions REST	0	Contrast Yes/No	No
# of Repetitions ACTIVE	0		
SAT			
SAT Location	A		
SAT Location	S		
SAT Location	I		
Tag Type	None		
TRICKS			
Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	2		

SAG T2

SAG T2

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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 (TL)	Imaging Options	NPW, EDR, TRF, Fast, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	SAG T1	FOV	28.0
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	475.0	Phase	224
Echo Train Length	3	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (P)
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 CV15	2.00
Slice Order	Interleaved	User CV21	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

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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 (TL)	Imaging Options	FC, NPW, Seq, EDR, TRF, Fast, IrP
Plane	OBLIQUE	PSD Name	frfse-xl
Series Description	SAG STIR		
SCAN TIMING		SCAN RANGE	
Flip Angle	160	FOV	28.0
TE	42.0	Slice Thickness	4.0
Number of Echoes	1	Slice Spacing	1.0
TR	3781.0		
TI	150	ACQ TIMING	
Echo Train Length	13	Freq	288
Receiver Bandwidth	31.25	Phase	192
		Freq DIR	A/P
		Fat Shift DIR	Normal (P)
		NEX	4.00
		Phase FOV	1.00
		Auto Shim	Auto
		Phase Correction	No
		Flow Direction Compensation	Freq
IMAGE ENHANCE		USER CVS	
Filter Choice	None	User CV21	1.00
		User CV22	1.00
		TR Min	3500.0
		TR Max	15000.0
GATING/TRIGGER		MULTI-PHASE	
Auto Trigger Type	Off	Seperate Series	0
		Mask Phase	0
		Mask Pause	0
FMRI		DIFFUSION	
PSD Trigger	Internal	Recon All Images	On
Slice Order	Interleaved		
View Order	Bottom/Up	CONTRAST	
# of Repetitions REST	0	Contrast Yes/No	No
# of Repetitions ACTIVE	0		
SAT			
SAT Location	S		
SAT Location	I		
Tag Type	None		
TRICKS			
Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	Off		

SAG STIR

SAG STIR

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AX T2 SLAB	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	FSE-XL
	Coil Configuration	HNS by GE (TL)	Imaging Options	FC, NPW, EDR, TRF, Fast, FR, MRF
	Plane	OBLIQUE	SCAN RANGE	
	Series Description	AX T2 SLAB	FOV	18.0
	SCAN TIMING		Slice Thickness	5.0
	Flip Angle	160	Slice Spacing	1.5
	TE	100.0	ACQ TIMING	
	Number of Echoes	1	Freq	288
	TR	4593.0	Phase	224
	Echo Train Length	23	Freq DIR	A/P
	Receiver Bandwidth	41.67	Fat Shift DIR	Normal (A)
	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	Slice
	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	2800.0
	# of Repetitions ACTIVE	0	TR Max	6000.0
	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 SLAB

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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 (TL)	Imaging Options	FC, NPW, EDR, TRF, Fast, FR, MRF
Plane	OBLIQUE		
Series Description	AX T2 DISCS		
SCAN TIMING		SCAN RANGE	
Flip Angle	160	FOV	18.0
TE	100.0	Slice Thickness	4.0
Number of Echoes	1	Slice Spacing	1.0
TR	5991.0		
Echo Train Length	23	ACQ TIMING	
Receiver Bandwidth	41.67	Freq	288
		Phase	224
		Freq DIR	A/P
		Fat Shift DIR	Normal (A)
		NEX	2.00
		Phase FOV	1.00
		Auto Shim	Auto
		Phase Correction	No
		Flow Direction	Slice
		Compensation	
IMAGE ENHANCE		USER CVS	
Filter Choice	None	User CV15	2.00
		User CV22	1.00
		TR Min	2800.0
		TR Max	6000.0
GATING/TRIGGER		MULTI-PHASE	
Auto Trigger Type	Off	Seperate Series	0
		Mask Phase	0
		Mask Pause	0
FMRI		DIFFUSION	
PSD Trigger	Internal	Recon All Images	On
Slice Order	Interleaved		
View Order	Bottom/Up	CONTRAST	
# of Repetitions REST	0	Contrast Yes/No	No
# of Repetitions ACTIVE	0		
SAT			
SAT Location	S		
SAT Location	I		
Tag Type	None		
TRICKS			
Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	2		

AX T2 DISCS

AX T2 DISCS

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Spin Echo
Coil Configuration	HNS by GE (TL)	Imaging Options	Fast, SS
Plane	OBLIQUE	SCAN RANGE	
Series Description	---OPTIONS---	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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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (TL)	Imaging Options	NPW, EDR, TRF, Fast, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T1 FSE	FOV	18.0
SCAN TIMING		Slice Thickness	5.0
Flip Angle	160	Slice Spacing	1.5
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	720.0	Phase	192
Echo Train Length	4	Freq DIR	Swap
Receiver Bandwidth	25.00	Fat Shift DIR	Normal
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 CV7	1.00
View Order	Bottom/Up	User CV15	2.00
# of Repetitions REST	0	User CV17	1.00
# of Repetitions ACTIVE	0	User CV22	1.00
SAT		TR Min	300.0
Tag Type	None	TR Max	750.0
TRICKS		MULTI-PHASE	
Pause On/Off	On	Seperate Series	0
Auto Subtract	0	Mask Phase	0
Auto SCIC	2	Mask Pause	0
OTHERS		DIFFUSION	
Protocol Notes	Prescribe anterior sat	Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

Ax T1 FSE

Ax T1 FSE

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+C Ax T1 FSE F/S	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	FSE-XL
	Coil Configuration	HNS by GE (TL)	Imaging Options	NPW, EDR, TRF, Fast, MRF
	Plane	OBLIQUE	SCAN RANGE	
	Series Description	+C Ax T1 FSE F/S	FOV	18.0
	SCAN TIMING		Slice Thickness	5.0
	Flip Angle	160	Slice Spacing	1.5
	TE	Min Full	ACQ TIMING	
	Number of Echoes	1	Freq	288
	TR	454.0	Phase	224
	Echo Train Length	4	Freq DIR	Swap
	Receiver Bandwidth	25.00	Fat Shift DIR	Normal
	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	USER CVS	
	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		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	2	DIFFUSION		
OTHERS		Recon All Images	On	
Protocol Notes	Prescribe anterior sat	CONTRAST		
		Contrast Yes/No	Yes	

+C Ax T1 FSE F/S

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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 (TL)	Imaging Options	NPW, EDR, TRF, Fast, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	+C Sag T1 FSE F/S	FOV	28.0
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