### Protocol: adult\_spine\_A13\_Neu\_Lumbar Spine\_2022

	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	Gradient Echo
	Imaging Options	Seg, Fast
	SCAN RANGE	,
	FOV	48.0
	Slice Thickness	10.00
	Slice Spacing	0.0
	Overlap Locations	0.0
	-	0
	ACQ TIMING	
	Freq	256
	Phase	128
	Freq DIR	Unswap
8	NEX	1.00
<u>S</u>	Phase FOV	1.00
;AL	Auto Shim	Auto
00	Phase Correction	No
7	RF Drive Mode	Single
2	Excitation Mode	Selective
LOCALISER - LOCALISER	USER CVS	
SAI	User CV20	1.00
Ŏ	User CV Mask2	0
	MULTI-PHASE	
	Seperate Series	0
	Mask Phase	0
	Mask Pause	0
	Preserve	0
	DIFFUSION	
	Recon All Images	On
	# Synthetic b-values	1
	Synthetic b-value	1000.0;
	CONTRAST	
	Contrast Yes/No	No

M	bar Spine_2022	
	SCAN TIMING	
	Number of Echoes	1
	IMAGE ENHANCE	
	Filter Choice	None
	GATING/TRIGGER	
	Pause After Navigator Prescan	0
	FMRI	
	PSD Trigger	Internal
	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

LOCALISER - LOCALISER

Protocol: adult\_spine\_A13\_Neu\_Lumbar Spine\_2022

	1 10100011 44	an_opino_/ (10_110a_2	
	IMAGING PARAMETERS		
	Imaging Mode	2D	
	Pulse Sequence	FSE-XL	
	Imaging Options	EDR, TRF, Fast, FR, ARC	
	Phase	2.00	
	SCAN RANGE		
	FOV	30.0	
	Slice Thickness	3.00	
	Slice Spacing	0.3	
	Overlap Locations	0.3	
	Number of Slices	20	
		20	
	ACQ TIMING		
	Freq	448	
	Phase	384	
T2	Freq DIR	A/P	
ບຸ	Fat Shift DIR	Normal (P)	
SA	NEX	1.50	
<del>ا</del>	# of Acq. Before Pause	0	
ard	Phase FOV	1.00	
- 7	Auto Shim	Auto	
Τ.	Phase Correction	No	
AG	RF Drive Mode	Single	
h S	<b>Excitation Mode</b>	Selective	
ardl h SAG T2 - ardl h SAG T2	FMRI		
w	PSD Trigger	Internal	
	View Order	Bottom/Up	
	# of Repetitions REST	0	
	# of Repetitions ACTIVE	0	
	SAT		
	SAT Location	S	
	SAT Location	1	
	Tag Type	None	
	TRICKS		
	Pause On/Off	On	
	Auto Subtract	0	
	Auto SCIC	3	
		<u>-</u>	

SCAN TIMING	
Flip Angle	160
TE	102.0
Number of Echoes	1
TR	2532.0
Echo Train Length	26
Receiver Bandwidth	50.00
IMAGE ENHANCE	
Filter Choice	None
USER CVS	
User CV12	1.00
User CV15	0
TR Min	2500.0
TR Max	11000.0
User CV30	1.00
User CV39	1.00
User CV Mask2	256
MULTI-PHASE	
Seperate Series	0
Mask Phase	0
Mask Pause	0
Preserve	0
DIFFUSION	
Recon All Images	On
# Synthetic b-values	1
Synthetic b-value	1000.0;
CONTRAST	
Contrast Yes/No	No

ardl h SAG T2 - ardl h SAG T2

Protocol: adult\_spine\_A13\_Neu\_Lumbar Spine\_2022

		ait_opino_/ tro_rtou_E		
	IMAGING PARAMETERS			
	Imaging Mode	2D		
	Pulse Sequence	FSE-XL		
	Imaging Options	EDR, TRF, Fast, FR, ARC		
	Phase	2.00		
	SCAN RANGE			
	FOV	20.0		
		30.0		
	Slice Thickness	3.00		
	Slice Spacing	0.3		
	Overlap Locations	0		
	Number of Slices	20		
	ACQ TIMING			
	Freq	448		
	Phase	384		
FS	Freq DIR	A/P		
Т2	Fat Shift DIR	Normal (P)		
٩G	NEX	1.50		
/S	# of Acq. Before Pause	0		
d lk	Phase FOV	1.00		
arc	Auto Shim	Auto		
-S	Phase Correction	No		
.2F	RF Drive Mode	Single		
G T	Excitation Mode	Selective		
ardl h SAG T2FS - ardl h SAG T2FS	FMRI			
ll h	PSD Trigger	Internal		
arc	View Order	Bottom/Up		
	# of Repetitions REST	0		
	# of Repetitions ACTIVE	0		
	SAT			
	SAT Location	S		
	SAT Location	1		
	Tag Type	None		
	Fat/Water Saturation	Fat Classic		
	TRICKS			
	Pause On/Off	On		
	Auto Subtract	0		
	Auto SCIC	3		

SCAN TIMING	
Flip Angle	160
TE	102.0
Number of Echoes	1
TR	2710.0
Echo Train Length	26
Receiver Bandwidth	50.00
IMAGE ENHANCE	
Filter Choice	None
USER CVS	
User CV12	1.00
User CV15	0
User CV19	1.00
TR Min	2500.0
TR Max	11000.0
User CV30	1.00
User CV39	1.00
User CV Mask2	256
MULTI-PHASE	
Seperate Series	0
Mask Phase	0
Mask Pause	0
Preserve	0
DIFFUSION	
Recon All Images	On
# Synthetic b-values	1
Synthetic b-value	1000.0;
CONTRAST	
Contrast Yes/No	No

ardl h SAG T2FS - ardl h SAG T2FS

		<u> </u>			
	IMAGING PARAMETERS		SCAN TIMING		
	Imaging Mode	2D	Flip Angle	160	
	Pulse Sequence	FSE-XL	TE	Min Full	
	Imaging Options	FC, EDR, TRF, Fast, ARC	Number of Echoes	1	
	Phase	2.00	TR	486.0	
	SCAN RANGE		Echo Train Length	5	
	FOV	30.0	Receiver Bandwidth	50.00	
	Slice Thickness	3.00	IMAGE ENHANCE		
	Slice Spacing	0.3	Filter Choice	None	
	Overlap Locations	0	USER CVS		
	Number of Slices	20	User CV12	1.00	
	ACQ TIMING		TR Min	400.0	
	Freq	384	TR Max	680.0	
	Phase	288	User CV30	1.00	
	Freq DIR	A/P	User CV39	1.00	
	Fat Shift DIR	Normal (P)	User CV Mask2	256	
T	NEX	1.50	MULTI-PHASE		1
Sag	# of Acq. Before Pause	0	Seperate Series	0	Sag
Ξ	Phase FOV	1.00	Mask Phase	0	8
둳	Auto Shim	Auto	Mask Pause	0	- ardl m Sag
- ard	Phase Correction	No	Preserve	0	a
Σ	Flow Direction	Freq			F
Sag T1	Compensation	Single	DIFFUSION	0.5	□ ˈg
SS	RF Drive Mode Excitation Mode	Sirigie Selective	Recon All Images # Synthetic b-values	On 1	ardl m Sag
ardl m		Selective	Synthetic b-value	1000.0;	
arc	FMRI		·	1000.0,	arc
	PSD Trigger	Internal	CONTRAST		
	View Order	Bottom/Up	Contrast Yes/No	No	
	# of Repetitions REST	0			
	# of Repetitions ACTIVE	0			
	SAT				
	SAT Location	Α			
	SAT Location	S			
	SAT Location	1			
	Tag Type	None			
	TRICKS				
	Pause On/Off	On			
	Auto Subtract	0			
	Auto SCIC	3			

Protocol: adult\_spine\_A13\_Neu\_Lumbar Spine\_2022

	IMAGING PARAMETERS			
	Imaging Mode	2D		
	Pulse Sequence	FSE-XL		
	Imaging Options	FC, EDR, TRF, Fast, ZIP1024, FR, ARC		
	SCAN RANGE			
	FOV	20.0		
	Slice Thickness	3.00		
	Slice Spacing	0.0		
	Overlap Locations	0		
	Number of Slices	40		
	ACQ TIMING			
	Freq	320		
	Phase	288		
ЭE	Freq DIR	A/P		
F.	Fat Shift DIR	Normal (A)		
芷	NEX	1.00		
12	# of Acq. Before Pause	0		
Š	Phase FOV	1.00		
무	Auto Shim	Auto		
arc	Phase Correction	No		
ardı h Ax T2 FRFSE - ardı h Ax T2 FRFSE	Flow Direction Compensation	Slice		
i. F	Excitation Mode	Selective		
12 F	FMRI			
×	PSD Trigger	Internal		
h/	View Order	Bottom/Up		
ırdl	# of Repetitions REST	0		
w	# of Repetitions ACTIVE	0		
	SAT			
	Tag Type	None		
	TRICKS			
	Pause On/Off	On		
	Auto Subtract	0		
	Auto SCIC	Off		
	OTHERS			
	Protocol Notes	Be careful of cross excitation		

SCAN TIMING	
Flip Angle	160
TE	102.0
Number of Echoes	1
TR	5425.0
Echo Train Length	34
Receiver Bandwidth	62.50
IMAGE ENHANCE	
Filter Choice	None
USER CVS	
User CV12	1.00
User CV15	0
TR Min	3500.0
TR Max	11000.0
User CV30	1.00
User CV39	1.00
User CV Mask2	1024
MULTI-PHASE	
Seperate Series	0
Mask Phase	0
Mask Pause	0
Preserve	0
DIFFUSION	
Recon All Images	On
# Synthetic b-values	1
Synthetic b-value	1000.0;
CONTRAST	
Contrast Yes/No	No

ardl h Ax T2 FRFSE - ardl h Ax T2 FRFSE

	1 10t0coi. ac	idit_spirie_A is_iveu_L		
	IMAGING PARAMETERS			
	Imaging Mode	2D		
	Pulse Sequence	FSE-XL		
	Imaging Options	FC, TRF, Fast, FR		
	SCAN RANGE			
	FOV	24.0		
	Slice Thickness	4.0		
	Slice Spacing	0.4		
	Number of Slices	1		
	ACQ TIMING			
	Freq	192		
	Phase	160		
	Freq DIR	S/I		
	Fat Shift DIR	Normal (I)		
	NEX	0.50		
п	Auto Shim	Auto		
	Phase Correction	No		
====SIJS====-	Flow Direction Compensation	Slice		
IS=	<b>Excitation Mode</b>	Selective		
	USER CVS			
"	User CV15	0		
H	User CV17	1.00		
	TR Min	2500.0		
-S	TR Max	11000.0		
S	User CV30	1.00		
	User CV Mask2	0		
ll	MULTI-PHASE			
	Seperate Series	0		
	Mask Phase	0		
	Mask Pause	0		
	Preserve	0		
	DIFFUSION			
	Recon All Images	On		
	Multi b-values	1000.0;		
	Multi NEX Values	1;		
	# Synthetic b-values	1		
	Synthetic b-value	1000.0;		
	CONTRAST			
	Contrast Yes/No	No		

bar Spine_2022	
SCAN TIMING	
Flip Angle	160
TE	102.0
Number of Echoes	1
TR	2500.0
Echo Train Length	23
Receiver Bandwidth	250.00
IMAGE ENHANCE	
Filter Choice	В
GATING/TRIGGER	
Auto Trigger Type	Off
FMRI	
PSD Trigger	Internal
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	2

IMAGING PARAMETERS   Imaging Mode   2D   Pulse Sequence   FSE-XL   TE   Min Full			_,	2011 THE 2011		
Pulse Sequence			20		400	
Imaging Options   TRF, Fast   Number of Echoes   1				· ·		
SCAN RANGE			-		******	
FOV 26.0 Slice Thickness 3.00 Slice Spacing 0.4 Overlap Locations 0 Number of Slices 26  ACQ TIMING Freq 384 Phase 320 Freq DIR R/L Fat Shift DIR Normal (L) NEX 1.00 # of Acq. Before Pause 0 Phase FOV 1.00 Auto Shim Auto Phase Correction No RF Drive Mode Single Echo Train Length 5 Receiver Bandwidth 50.00  IMAGE ENHANCE Filter Choice None  USER CVS  USER CVS  USER CVS  USER CVS  USER CVS  WULTI-PHASE Seperate Series 0 Mask Phase 0 Mask Phase 0 Mask Phase 0 Phase FOV 1.00 Auto Shim Auto Phase Correction No RF Drive Mode Single Excitation Mode Selective  FMRI PSD Trigger Internal Slice Order Interleaved View Order Bottom/Up # of Repetitions REST 0 # of Repetitions ACTIVE 0  SAT Tag Type None  TRICKS		imaging Options	TRF, Fast		•	
Slice Thickness 3.00 Slice Spacing 0.4 Overlap Locations 0 Number of Slices 26  ACQ TIMING Freq 384 Phase 320 Freq DIR R/L Fat Shift DIR Normal (L) NEX 1.00 Mask Phase 0 # of Acq. Before Pause 0 Phase FOV 1.00 Auto Shim Auto Phase Correction No RF Drive Mode Single Excitation Mode Selective  FMRI PSD Trigger Internal Slice Order Interleaved View Order Bottom/Up # of Repetitions ACTIVE 0  Satt Tag Type None  IMAGE ENHANCE None  IMAGE ENHANCE  None  Mask ENHANCE  None  Wuser CVS User CV30 1.00  User CV30 1.00  MultI-PHASE Seperate Series 0 Mask Phase 0 Mask Phase 0 Preserve 0  Mask Pause 0 Preserve 0  DIFFUSION Recon All Images On # Synthetic b-value 1000.0;  CONTRAST Contrast Yes/No No						
Silice Spacing						
Overlap Locations   0   Number of Slices   26					30.00	
Number of Slices   26     USER CVS					•	
ACQ TIMING		<u>-</u>		Filter Choice	None	
Freq			20	USER CVS		
Phase 320 Freq DIR R/L Fat Shift DIR Normal (L) NEX 1.00 # of Acq. Before Pause 0 Phase FOV 1.00 Auto Shim Auto Phase Correction No RF Drive Mode Single Excitation Mode Selective  FMRI PSD Trigger Internal Slice Order Interleaved View Order Bottom/Up # of Repetitions REST 0 # of Repetitions ACTIVE 0  SAT Tag Type None  TRICKS   MULTI-PHASE Seperate Series 0 Mask Phase 0 Mask Phase 0 Preserve 0  DIFFUSION Recon All Images On # Synthetic b-values 1 Synthetic b-value 1000.0;  CONTRAST Contrast Yes/No No		ACQ TIMING				
Freq DIR R/L Fat Shift DIR Normal (L) NEX 1.00 # of Acq. Before Pause 0 Phase FOV 1.00 Auto Shim Auto Phase Correction No RF Drive Mode Single Excitation Mode Selective  FMRI PSD Trigger Internal Slice Order Interleaved View Order Bottom/Up # of Repetitions REST 0 # of Repetitions ACTIVE 0  Separate Series 0 Mask Phase 0 Preserve 0  DIFFUSION Recon All Images On # Synthetic b-values 1 Synthetic b-values 1 Synthetic b-values 1 Synthetic b-value 1000.0;  CONTRAST Contrast Yes/No No  TRICKS		· ·				
Fat Shift DIR Normal (L) NEX 1.00  # of Acq. Before Pause 0 Phase FOV 1.00 Auto Shim Auto Phase Correction No RF Drive Mode Single Excitation Mode Selective  FMRI PSD Trigger Internal Slice Order Interleaved View Order Bottom/Up # of Repetitions REST 0 # of Repetitions ACTIVE 0  Sepretae Series 0 Mask Phase 0 Mask Pause 0 Preserve 0  DIFFUSION Recon All Images On # Synthetic b-values 1 Synthetic b-value 1000.0;  CONTRAST Contrast Yes/No No  No  TRICKS				User CV Mask2	0	
NEX 1.00 # of Acq. Before Pause 0 Phase FOV 1.00 Auto Shim Auto Phase Correction No RF Drive Mode Single Excitation Mode Selective  FMRI PSD Trigger Internal Slice Order View Order Bottom/Up # of Repetitions REST 0 # of Repetitions ACTIVE 0  SAT Tag Type None  TRICKS  Mask Phase 0 Mask Pause 0 Preserve 0  DIFFUSION Recon All Images On # Synthetic b-value 1000.0;  CONTRAST Contrast Yes/No No		-		MULTI-PHASE		
Auto Shim Phase Correction Phase Correction RF Drive Mode Excitation Mode Single Excitation Mode Selective  FMRI PSD Trigger Slice Order View Order # of Repetitions REST # of Repetitions ACTIVE  SAT Tag Type None  TRICKS  Preserve  DIFFUSION Recon All Images  On # Synthetic b-value 1000.0;  CONTRAST Contrast Yes/No No	7		( )	Seperate Series	0	Σ
Auto Shim Phase Correction Phase Correction RF Drive Mode Excitation Mode Single Excitation Mode Selective  FMRI PSD Trigger Slice Order View Order # of Repetitions REST # of Repetitions ACTIVE  SAT Tag Type None  TRICKS  Preserve  DIFFUSION Recon All Images  On # Synthetic b-value 1000.0;  CONTRAST Contrast Yes/No No	ج			Mask Phase	0	<u>ب</u>
Auto Shim Phase Correction RF Drive Mode Excitation Mode Single Excitation Mode Selective  FMRI PSD Trigger Slice Order View Order # of Repetitions REST # of Repetitions ACTIVE  Tag Type  None  Phase Correction No Recon All Images On Recon All Images  Synthetic b-value  # Synthetic b-value  1000.0;  CONTRAST Contrast Yes/No No	8	· · · · · · · · · · · · · · · · · · ·		Mask Pause	0	- COR T1
Excitation Mode  Selective  FMRI  PSD Trigger  Slice Order  View Order  # of Repetitions REST # of Repetitions ACTIVE  SAT  Tag Type  None  # Synthetic b-values  Synthetic b-value  1000.0;  CONTRAST  Contrast Yes/No  No  **Synthetic b-value*  1000.0;  **CONTRAST  Contrast Yes/No  No  **No  **Synthetic b-value*  1000.0;  **CONTRAST  Contrast Yes/No  No  **No  **No	R T1 - (			Preserve	0	2
Excitation Mode  Selective  FMRI  PSD Trigger  Slice Order  View Order  # of Repetitions REST # of Repetitions ACTIVE  SAT  Tag Type  None  # Synthetic b-values  Synthetic b-value  1000.0;  CONTRAST  Contrast Yes/No  No  **Synthetic b-value*  1000.0;  **CONTRAST  Contrast Yes/No  No  **No  **Synthetic b-value*  1000.0;  **CONTRAST  Contrast Yes/No  No  **No  **No				DIFFUSION		COR T1
Excitation Mode  Selective  FMRI  PSD Trigger  Slice Order  View Order  # of Repetitions REST # of Repetitions ACTIVE  SAT  Tag Type  None  # Synthetic b-values  Synthetic b-value  1000.0;  CONTRAST  Contrast Yes/No  No  **Synthetic b-value*  1000.0;  **CONTRAST  Contrast Yes/No  No  **No  **Synthetic b-value*  1000.0;  **CONTRAST  Contrast Yes/No  No  **No  **No	8			Recon All Images	On	8
FMRI PSD Trigger Internal Slice Order Interleaved View Order Bottom/Up # of Repetitions REST 0 # of Repetitions ACTIVE 0  SAT Tag Type None  Synthetic b-value 1000.0;  CONTRAST Contrast Yes/No No  No  TRICKS			•	# Synthetic b-values	1	
PSD Trigger Internal Slice Order Interleaved View Order Bottom/Up # of Repetitions REST 0 # of Repetitions ACTIVE 0  SAT Tag Type None TRICKS		EMDI		Synthetic b-value	1000.0;	
Slice Order Interleaved View Order Bottom/Up # of Repetitions REST 0 # of Repetitions ACTIVE 0  SAT Tag Type None  TRICKS			Internal	CONTRAST		
View Order Bottom/Up # of Repetitions REST 0 # of Repetitions ACTIVE 0  SAT Tag Type None  TRICKS				Contrast Yes/No	No	
# of Repetitions REST 0 # of Repetitions ACTIVE 0  SAT Tag Type None TRICKS						
# of Repetitions ACTIVE 0  SAT Tag Type None TRICKS			•			
SAT Tag Type None TRICKS		-				
Tag Type None TRICKS		-				
			None			
Pause On/Off On		TRICKS				
		Pause On/Off	On			
Auto Subtract 0		Auto Subtract	0			
Auto SCIC 3		Auto SCIC	3			

		·	2244 74444		
	IMAGING PARAMETERS	0.0	SCAN TIMING	400	
	Imaging Mode	2D	Flip Angle	160	
	Pulse Sequence	FSE-XL	TE	50.0	
	Imaging Options	Seq, TRF, Fast, IrP	Number of Echoes	1	
	SCAN RANGE		TR	4562.0	
	FOV	26.0	TI	140	
	Slice Thickness	4.00	Echo Train Length	11	
	Slice Spacing	0.4	Receiver Bandwidth	35.71	
	Overlap Locations	0	IMAGE ENHANCE		
	Number of Slices	18	Filter Choice	None	
	ACQ TIMING		USER CVS		
	Freq	320	User CV12	1.00	
	Phase	256	User CV15	0	
	Freq DIR	R/L	TR Min	3500.0	
꼼	Fat Shift DIR	Normal (L)	TR Max	15000.0	
S	NEX	1.00	User CV30	1.00	
OR	# of Acq. Before Pause	0	User CV Mask2	0	
COR STIR - COR STIR	Phase FOV	1.00	MULTI-PHASE		-
<u>∝</u>	Auto Shim	Auto	Seperate Series	0	
ST	Phase Correction	No	Mask Phase	0	
꼰	RF Drive Mode	Single	Mask Pause	0	
ၓ	Excitation Mode	Selective	Preserve	0	
	FMRI		DIFFUSION		
	PSD Trigger	Internal	Recon All Images	On	
	Slice Order	Interleaved	# Synthetic b-values	1	
	View Order	Bottom/Up	Synthetic b-value	1000.0;	
	# of Repetitions REST	0	CONTRAST	,	_
	# of Repetitions ACTIVE	0	CONTRAST  Contrast Yes/No	No	
	SAT		Contrast 165/110	740	
	Tag Type	None			
	TRICKS				
	Pause On/Off	On			
	Auto Subtract	0			
	Auto SCIC	3			

_		dait_opino_/ (10_1104_E
	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	FSE-XL
	Imaging Options	FC, TRF, Fast, FR
	SCAN RANGE	
	FOV	24.0
	Slice Thickness	4.0
	Slice Spacing	0.4
	Number of Slices	1
	ACQ TIMING	
	Freq	192
	Phase	192
	Freq DIR	S/I
	Fat Shift DIR	Normal (I)
	NEX	0.50
H	Auto Shim	Auto
1	Phase Correction	No
====Contrast==== - ====Contrast====	Flow Direction Compensation	Slice
Cor	Excitation Mode	Selective
∦	USER CVS	
ii •	User CV15	0
H	User CV17	1.00
1	TR Min	2500.0
ras	TR Max	11000.0
ont	User CV30	1.00
) = (	User CV Mask2	0
∦	MULTI-PHASE	
	Seperate Series	0
	Mask Phase	0
	Mask Pause	0
	Preserve	0
	DIFFUSION	
	Recon All Images	On
	Multi b-values	1000.0;
	Multi NEX Values	1;
	# Synthetic b-values	1
	Synthetic b-value	1000.0;
	CONTRAST	
	Contrast Yes/No	No

SCAN TIMING	
Flip Angle	160
TE	102.0
Number of Echoes	1
TR	2500.0
Echo Train Length	23
Receiver Bandwidth	250.00
IMAGE ENHANCE	
Filter Choice	В
GATING/TRIGGER	
Auto Trigger Type	Off
FMRI	
PSD Trigger	Internal
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	2

Protocol: adult\_spine\_A13\_Neu\_Lumbar Spine\_2022

	1 1010001. au	uit_spirie_A15_Neu_Li	diffical Opinio_2022	
	IMAGING PARAMETERS		SCAN TIMING	
	Imaging Mode	2D	Flip Angle	160
	Pulse Sequence	FSE-XL	TE	Min Full
	Imaging Options	EDR, TRF, Fast, ARC	Number of Echoes	1
	Phase	2.00	TR	734.0
	SCAN RANGE		Echo Train Length	5
	FOV	20.0	Receiver Bandwidth	41.67
	Slice Thickness	3.00	IMAGE ENHANCE	
	Slice Spacing	0.3	Filter Choice	None
	Overlap Locations	0	USER CVS	
	Number of Slices	25	User CV12	1.00
	ACQ TIMING		User CV19	1.00
ti	Freq	320	TR Min	300.0
tras	Phase	288	TR Max	750.0
Ş	Freq DIR	A/P	User CV30	1.00
Pre Contrast	Fat Shift DIR	Normal (A)	User CV39	1.00
<u>P</u>	NEX	1.50	User CV Mask2	256
FS	# of Acq. Before Pause	0	MULTI-PHASE	
I	Phase FOV	1.00	Seperate Series	0
Š	Auto Shim	Auto	Mask Phase	0
st	Phase Correction	No	Mask Pause	0
ıtra	RF Drive Mode	Single	Preserve	0
Ax T1 FS Pre Contrast - Ax T1	Excitation Mode	Selective	DIFFUSION	
<u>e</u>	FMRI		Recon All Images	On
G.	PSD Trigger	Internal	# Synthetic b-values	1
Ē.	View Order	Bottom/Up	Synthetic b-value	1000.0;
⊢ ×	# of Repetitions REST	0	CONTRAST	
Ä	# of Repetitions ACTIVE	0	Contrast Yes/No	No
	SAT		0011111011100,110	,,,
	SAT Location	Α		
	Tag Type	None		
	Fat/Water Saturation	Fat Classic		
	TRICKS			
	Pause On/Off	On		
	Auto Subtract	0		
	Auto SCIC	2		

Ax T1 FS Pre Contrast - Ax T1 FS Pre Contrast

	IMAGING PARAMETERS		SCAN TIMING		
	Imaging Mode	2D	Flip Angle	160	
	Pulse Sequence	FSE-XL	TE	Min Full	
	Imaging Options	EDR, TRF, Fast, ARC	Number of Echoes	1	
	Phase	2.00	TR	702.0	
	SCAN RANGE		Echo Train Length	5	
	FOV	20.0	Receiver Bandwidth	50.00	
	Slice Thickness	3.00	IMAGE ENHANCE		
	Slice Spacing	0.3	Filter Choice	None	
	Overlap Locations	0	USER CVS		
	Number of Slices	25	User CV12	1.00	
	ACQ TIMING		User CV19	1.00	
st	Freq	320	TR Min	300.0	<del>;</del>
tras	Phase	288	TR Max	750.0	i d
ος	Freq DIR	A/P	User CV30	1.00	Č
Post Contrast	Fat Shift DIR	Normal (A)	User CV39	1.00	<del>t</del>
Po	NEX	1.50	User CV Mask2	256	Ğ
FS	# of Acq. Before Pause	0	MULTI-PHASE		$\mathcal{G}_{\mathcal{L}}$
Σ	Phase FOV	1.00	Seperate Series	0	Σ
×	Auto Shim	Auto	Mask Phase	0	×
Ŀ	Phase Correction	No	Mask Pause	0	
ras	RF Drive Mode	Single	Preserve	0	
ont	Excitation Mode	Selective		•	tuo
FS Post Contrast - Ax T1	FMRI		DIFFUSION  Decen All Images	On	Ax T1 ES Post Contrast - Ax T1 ES Post Contrast
SOC	PSD Trigger	Internal	Recon All Images # Synthetic b-values	0n 1	000
တ	View Order	Bottom/Up	Synthetic b-value	1000.0;	V.
7-	# of Repetitions REST	0		1000.0,	5
Ax T1 F	# of Repetitions ACTIVE	0	CONTRAST		×
Ø	SAT		Contrast Yes/No	Yes	٥
	SAT Location	A			
	Tag Type	None			
	Fat/Water Saturation	Fat Classic			
	TRICKS				
	Pause On/Off	On			
	Auto Subtract	0			
	Auto SCIC	2			
		<del>-</del>			

Protocol: adult\_spine\_A13\_Neu\_Lumbar Spine\_2022

	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	FSE-XL
	Imaging Options	EDR, TRF, Fast, ARC
	Phase	2.00
	SCAN RANGE	
	FOV	30.0
	Slice Thickness	3.00
	Slice Spacing	0.3
	Overlap Locations	0
	Number of Slices	32
	ACQ TIMING	
	Freq	320
ıst	Phase	288
ıtra	Freq DIR	A/P
Sor	Fat Shift DIR	Normal (P)
st (	NEX	1.00
РС	# of Acq. Before Pause	0
T	Phase FOV	1.00
₽ G	Auto Shim	Auto
S.	Phase Correction	No
St.	RF Drive Mode	Single
ıtra	Excitation Mode	Selective
SAG T1 Post Contrast - SAG T1 Post Contrast	FMRI	
ost	PSD Trigger	Internal
1 P	View Order	Bottom/Up
Ė	# of Repetitions REST	0
SAG	# of Repetitions ACTIVE	0
0,	SAT	
	Tag Type	None
	Fat/Water Saturation	Fat Classic
	TRICKS	
	Pause On/Off	On
	Auto Subtract	0
	Auto SCIC	3
	CONTRAST	
	Contrast Yes/No	Yes

SCAN TIMING	
Flip Angle	160
TE	Min Full
Number of Echoes	1
TR	547.0
Echo Train Length	5
Receiver Bandwidth	50.00
IMAGE ENHANCE	
Filter Choice	None
USER CVS	
User CV12	1.00
User CV19	1.00
TR Min	300.0
TR Max	750.0
User CV30	1.00
User CV39	1.00
User CV Mask2	256
MULTI-PHASE	
Seperate Series	0
Mask Phase	0
Mask Pause	0
Preserve	0
DIFFUSION	
Recon All Images	On
# Synthetic b-values	1
# Synthetic b-values Synthetic b-value	1 1000.0;
•	•
Synthetic b-value	•
Synthetic b-value TRACKER	1000.0;
Synthetic b-value TRACKER Tracker Length	200.0

SAG T1 Post Contrast - SAG T1 Post Contrast

	i iotocoi. ac	uit_spirie_A i 3_iveu	_Lumbar opine_z
	IMAGING PARAMETERS		SCAN TIMING
	Imaging Mode	2D	Flip Angle
	Pulse Sequence	FSE-XL	TE
	Imaging Options	FC, TRF, Fast, FR	Number of Ech
	SCAN RANGE		TR
	FOV	24.0	Echo Train Ler
	Slice Thickness	4.0	Receiver Band
	Slice Spacing	0.4	IMAGE ENHAN
	Number of Slices	1	Filter Choice
	ACQ TIMING		GATING/TRIGO
	Freq	192	Auto Trigger T
	Phase	192	
	Freq DIR	S/I	FMRI
	Fat Shift DIR	Normal (I)	PSD Trigger
	NEX	0.50	View Order
п	Auto Shim	Auto	# of Repetition
	Phase Correction	No	# of Repetition
-Su	Flow Direction	Slice	SAT
otio	Compensation		Tag Type
Q-	Excitation Mode	Selective	TRICKS
ij	USER CVS		Pause On/Off
-	User CV15	0	Auto Subtract
	User CV17	1.00	Auto SCIC
ll ll	TR Min	2500.0	
ons	TR Max	11000.0	
)pti	User CV30	1.00	
====Options==== - ====Options====	User CV Mask2	0	
ij	MULTI-PHASE		
	Seperate Series	0	
	Mask Phase	0	
	Mask Pause	0	
	Preserve	0	
	DIFFUSION		
	Recon All Images	On	
	Multi b-values	1000.0;	
	Multi NEX Values	1;	
	# Synthetic b-values	1	
	Synthetic b-value	1000.0;	
	CONTRAST		
	Contrast Yes/No	No	

nbar Spine_2022	
SCAN TIMING	
Flip Angle	160
TE	102.0
Number of Echoes	1
TR	2500.0
Echo Train Length	23
Receiver Bandwidth	250.00
IMAGE ENHANCE	
Filter Choice	В
GATING/TRIGGER	
Auto Trigger Type	Off
FMRI	
PSD Trigger	Internal
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	2

	1 10100011 44	uit_spirie_A15_Neu_L			
	IMAGING PARAMETERS		SCAN TIMING		
	Imaging Mode	3D	TE	90.0	
	Pulse Sequence	Cube	Number of Echoes	1	
	Imaging Options FC, EDR, Fast, ZIP512, FR,	TR	1525.0		
	Phase	ARC, HS 2.00	Echo Train Length	60	
	Slice	2.00	Receiver Bandwidth	27.78	
	HyperSense	1.20	IMAGE ENHANCE		
	SCAN RANGE	1.20	Filter Choice	Α	
	FOV	20.0	USER CVS		
	Slice Thickness	1.20	User CV22	2.00	
	Location per Slab	80	User CV30	1.00	
	Overlap Locations	0	User CV34	100.00	
	Number of Slices	1	User CV Mask2	10	
	ACQ TIMING		MULTI-PHASE		
	Freq	288	Seperate Series	0	
T2	Phase	288	Mask Phase	0	<b>T</b> 2
pe	Freq DIR	R/L	Mask Pause	0	pe
ပ်	Fat Shift DIR	Normal (R)	Preserve	0	C
Α×	NEX	1.50	DIFFUSION		¥
.2 -	Phase FOV	1.00	Recon All Images	On	. 2
e T	Auto Shim	Auto	# Synthetic b-values	1	e E
gņ	Phase Correction	No	Synthetic b-value	1000.0;	g
Ax Cube T2 - Ax Cube T2	Flow Direction Compensation	Freq	CONTRAST		Ax Cube T2 - Ax Cube T2
	RF Drive Mode	Single	Contrast Yes/No	No	
	Excitation Mode	Selective			
	FMRI				
	PSD Trigger	Internal			
	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			