Protocol: adult_spine_Ultrafast 3 part w spine

		. addit_opino_onialao
	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	Gradient Echo
	Imaging Options	Seq, Fast
	SCAN RANGE	
	FOV	48.0
	Slice Thickness	7.00
	Slice Spacing	0.0
	Overlap Locations	0
	Number of Slices	15
	ACQ TIMING	10
	Freq	256
	Phase	128
	Freq DIR	Unswap
	NEX	1.00
00	Phase FOV	1.00
ЪГ	Auto Shim	Auto
0	Phase Correction	No
	RF Drive Mode	Single
8	Excitation Mode	Selective
TOP LOC - TOP LOC	USER CVS	30.00.00
2	User CV20	1.00
	User CV20 User CV Mask2	0
		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

part w spine	
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

TOP LOC - TOP LOC

Protocol: adult_spine_Ultrafast 3 part w spine

	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	Gradient Echo
	Imaging Options	Seq, Fast
	SCAN RANGE	
	FOV	48.0
	Slice Thickness	7.00
	Slice Spacing	5.0
	Overlap Locations	0
	Number of Slices	17
	ACQ TIMING	
	Freq	256
	Phase	128
	Freq DIR	Unswap
	NEX	1.00
Ç	Phase FOV	1.00
07	Auto Shim	Auto
ЭС	Phase Correction	No
- ⊥(RF Drive Mode	Single
SC.	Excitation Mode	Selective
TOP LOC - TOP LOC	USER CVS	
90.	User CV20	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	1.0;
	# Synthetic b-values	1
	Synthetic b-value	1000.0;
	CONTRAST	
	Contrast Yes/No	No

part w spirie	
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

TOP LOC - TOP LOC

		· addit_opino_oniadot
	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	Gradient Echo
	Imaging Options	Seq, Fast
	SCAN RANGE	
	FOV	48.0
	Slice Thickness	10.00
	Slice Spacing	0.0
	Overlap Locations	0
	Number of Slices	19
	ACQ TIMING	
	Freq	256
	Phase	128
	Freq DIR	Unswap
O	NEX	1.00
Õ	Phase FOV	1.00
TC	Auto Shim	Auto
BC	Phase Correction	No
- O	RF Drive Mode	Single
07.	Excitation Mode	Selective
BOT LOC - BOT LOC	USER CVS	
В	User CV20	1.00
	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
		-

ا ک	part w spine		
	SCAN TIMING	1	
	Number of Echoes	7	
	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		BOT LOC - BOT LOC
	Pause On/Off	On	ᄅ
	Auto Subtract	0	BO
	Auto SCIC	Off	$\frac{1}{0}$
			ŏ
			BC

IMACING DADAMETERS			
	IMAGING PARAMETERS	25	
	Imaging Mode	2D	
	Pulse Sequence	FSE-XL	
	Imaging Options	EDR, TRF, Fast, ZIP512, ARC	
	Phase	2.00	
	SCAN RANGE		
	FOV	22.0	
	Slice Thickness	3.00	
	Slice Spacing	0.3	
	Overlap Locations	0	
	Number of Slices	17	
	ACQ TIMING		
	Freq	384	
	Phase	288	
	Freq DIR	A/P	
	Fat Shift DIR	Normal (P)	
٩	NEX	1.50	
2	# of Acq. Before Pause	0	
Ξ	Phase FOV	1.00	
ag	Auto Shim	Auto	
S -	Phase Correction	No	
Р	RF Drive Mode	Single	
\vdash	Excitation Mode	Selective	
Sag T1 TOP - Sag T1 TOP	FMRI		
Saç	PSD Trigger	Internal	
	View Order	Bottom/Up	
	# of Repetitions REST	0	
	# of Repetitions ACTIVE	0	
	SAT	-	
	SAT Location	A	
	SAT Location	S	
	SAT Location	3 1	
		i None	
	Tag Type	INOTIC	
	TRICKS		
	Pause On/Off	On	
	Auto Subtract	0	
	Auto SCIC	3	
	CONTRAST		
	Contrast Yes/No	No	

SCAN TIMING	
Flip Angle	160
TE	Min Full
Number of Echoes	1
TR	699.0
Echo Train Length	4
Receiver Bandwidth	25.00
IMAGE ENHANCE	
Filter Choice	None
USER CVS	
User CV12	1.00
User CV18	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
Multi b-values	1000.0;
Multi NEX Values	1.0;
# Synthetic b-values	1
Synthetic b-value	1000.0;
TRACKER	
Tracker Length	200.0
Tracker Thickness	20.0

		. addit_spirie_Oitralast			
	IMAGING PARAMETERS		SCAN TIMING		
	Imaging Mode	2D	Flip Angle	160	
	Pulse Sequence	FSE-XL	TE	120.0	
	Imaging Options	FC, EDR, TRF, Fast,	Number of Echoes	1	
		ZIP512, FR, ARC	TR	5956.0	
	Phase	2.00	Echo Train Length	24	
	SCAN RANGE		Receiver Bandwidth	25.00	
	FOV	22.0	IMAGE ENHANCE		
	Slice Thickness	3.00	Filter Choice	None	
	Slice Spacing	0.3	USER CVS		
	Overlap Locations	0	User CV7	1.00	
	Number of Slices	17	User CV15	0	
	ACQ TIMING		User CV18	1.00	
	Freq	416	TR Min	2500.0	
	Phase	288	TR Max	11000.0	
	Freq DIR	A/P	User CV30	1.00	
P.	Fat Shift DIR	Normal (P)	User CV39	1.00	9
ĭ	NEX	2.00	User CV Mask2	256	SAG T2 TOP - SAG T2 TOP
T2	Phase FOV	1.00		250	
AG	Auto Shim	Auto	MULTI-PHASE		
S	Phase Correction	Yes	Seperate Series	0	
SAG T2 TOP - SAG T2 TOP	Flow Direction	Freq	Mask Phase	0	ЭС
	Compensation	0: 1	Mask Pause	0) T
T2	RF Drive Mode	Single	Preserve	0	12
AG	Excitation Mode	Selective	DIFFUSION		AG
(C)	FMRI		Recon All Images	On	(C)
	PSD Trigger	Internal	Multi b-values	1000.0;	
	View Order	Bottom/Up	Multi NEX Values	1.0;	
	# of Repetitions REST	0	# Synthetic b-values	1	
	# of Repetitions ACTIVE	0	Synthetic b-value	1000.0;	
	SAT		CONTRAST		
	SAT Location	Α	Contrast Yes/No	No	
	SAT Location	S			
	SAT Location	1			
	Tag Type	None			
	TRICKS				
	Pause On/Off	On			
	Auto Subtract	0			
	Auto SCIC	3			

Protocol: adult_spine_Ultrafast 3 part w spine

	IMAGING PARAMETERS		
	Imaging Mode	2D	
	Pulse Sequence	PROPELLER	
	Imaging Options	EDR, TRF, Fast, ARC	
	Phase	2.00	
		2.00	
	SCAN RANGE		
	FOV	22.0	
	Slice Thickness	3.00	
	Slice Spacing	0.3	
	Overlap Locations	0	
	Number of Slices	17	
	ACQ TIMING		
	Freq	384	
	Freq DIR	A/P	
do	Fat Shift DIR	Normal (P)	
Pr	NEX	1.50	
ОР	# of Acq. Before Pause	0	
1	Auto Shim	Auto	
Ţ	Phase Correction	No	
Saç	RF Drive Mode	Single	
) - 0	Excitation Mode	Selective	
Sag T1 TOP Prop - Sag T1 TOP Prop	FMRI		
٦ ا	PSD Trigger	Internal	
2	View Order	Bottom/Up	
7	# of Repetitions REST	0	
ag	# of Repetitions ACTIVE	0	
S	SAT		
	SAT Location	A	
	SAT Location	S	
	SAT Location	1	
	Tag Type	None	
	TRICKS		
	Pause On/Off	On	
	Auto Subtract	0	
	Auto SCIC	3	
	CONTRAST		
	Contrast Yes/No	No	

SCAN TIMING	
Flip Angle	160
Number of Echoes	1
TR	616.0
Echo Train Length	4
Receiver Bandwidth	35.71
IMAGE ENHANCE	
Filter Choice	None
USER CVS	
User CV5	1.00
User CV12	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
Multi b-values	1000.0;
Multi NEX Values	1.0;
# Synthetic b-values	1
Synthetic b-value	1000.0;
TRACKER	
Tracker Length	200.0
Tracker Thickness	20.0

Sag T1 TOP Prop - Sag T1 TOP Prop

		. addit_spirie_Oitrara	to part it opino		
	IMAGING PARAMETERS		SCAN TIMING		
	Imaging Mode	2D	Flip Angle	160	
	Pulse Sequence	FSE-XL	TE	120.0	
	Imaging Options	FC, EDR, TRF, Fast,	Number of Echoes	1	
		ZIP512, FR, ARC	TR	4497.0	
	Phase	2.00	Echo Train Length	24	
	SCAN RANGE		Receiver Bandwidth	50.00	
	FOV	22.0	IMAGE ENHANCE		
	Slice Thickness	3.00	Filter Choice	None	
	Slice Spacing	0.3	USER CVS		
	Overlap Locations	0	User CV12	1.00	
	Number of Slices	17	User CV15	0	
	ACQ TIMING		User CV18	1.00	
	Freq	416	TR Min	2500.0	
	Phase	256	TR Max	11000.0	
	Freq DIR	A/P	User CV30	1.00	
<u>G</u>	Fat Shift DIR	Normal (P)	User CV39	1.00	鱼
\preceq	NEX	1.00	User CV Mask2	256	\vdash
T2	Phase FOV	1.00		230	- SAG T2
TOP - SAG T2 TOP	Auto Shim	Auto	MULTI-PHASE		
S	Phase Correction	Yes	Seperate Series	0	
Р	Flow Direction	Freq	Mask Phase	0	P
7	Compensation		Mask Pause	0	SAG T2 TOP - SAG T2 TOP
T2	RF Drive Mode	Single	Preserve	0	
SAG T2	Excitation Mode	Selective	DIFFUSION		
S	FMRI		Recon All Images	On	S
	PSD Trigger	Internal	Multi b-values	1000.0;	
	View Order	Bottom/Up	Multi NEX Values	1.0;	
	# of Repetitions REST	0	# Synthetic b-values	1	
	# of Repetitions ACTIVE	0	Synthetic b-value	1000.0;	
	SAT		CONTRAST		
	SAT Location	Α	Contrast Yes/No	No	
	SAT Location	S			
	SAT Location	1			
	Tag Type	None			
	TRICKS				
	Pause On/Off	On			
	Auto Subtract	0			
	Auto SCIC	3			

Protocol: adult_spine_Ultrafast 3 part w spine

	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	FSE-XL
	Imaging Options	EDR, TRF, Fast, ZIP512, ARC
	Phase	2.00
	SCAN RANGE	
	FOV	22.0
	Slice Thickness	3.00
	Slice Spacing	0.3
	Overlap Locations	0
	Number of Slices	17
	ACQ TIMING	
	Freq	384
	Phase	224
	Freq DIR	A/P
ЭP	Fat Shift DIR	Normal (P)
) T	NEX	1.00
ası	# of Acq. Before Pause	0
Y F	Phase FOV	1.00
g T	Auto Shim	Auto
Sa	Phase Correction	No
Ь-	RF Drive Mode	Single
Sag T1 Fast TOP - Sag T1 Fast TOP	Excitation Mode	Selective
ast	FMRI	
1 F	PSD Trigger	Internal
g T	View Order	Bottom/Up
Sa	# 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
	CONTRAST	
	Contrast Yes/No	No

SCAN TIMING		
Flip Angle	160	
TE	Min Full	
Number of Echoes	1	
TR	527.0	
Echo Train Length	5	
Receiver Bandwidth	25.00	
IMAGE ENHANCE		
Filter Choice	None	
USER CVS		
User CV12	1.00	
User CV18	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	
Multi b-values	1000.0;	
Multi NEX Values	1.0;	
# Synthetic b-values	1	
Synthetic b-value	1000.0;	
TRACKER		
Tracker Length	200.0	
Tracker Thickness	20.0	

Sag T1 Fast TOP - Sag T1 Fast TOP

Protocol: adult_spine_Ultrafast 3 part w spine

	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	FSE-XL
	Imaging Options	FC, EDR, TRF, Fast, FR, ARC
	Phase	2.00
	SCAN RANGE	
	FOV	19.0
	Slice Thickness	3.50
	Slice Spacing	0.3
	Overlap Locations	0
	Number of Slices	27
	ACQ TIMING	
ast	Freq	320
ц.	Phase	256
SE	Freq DIR	A/P
RF	Fat Shift DIR	Normal (A)
2 F	NEX	1.00
Ë	Phase FOV	1.00
Ã.	Auto Shim	Auto
ast	Phase Correction	Yes
Ax T2 FRFSE- Fast - Ax T2 FRFSE- Fast	Flow Direction Compensation	Slice
FS	RF Drive Mode	Single
FR	Excitation Mode	Selective
T2	FMRI	
Ax	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	3

SCAN TIMING	
Flip Angle	160
TE	88.0
Number of Echoes	1
TR	5718.0
Echo Train Length	19
Receiver Bandwidth	27.78
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
Multi b-values	1000.0;
Multi NEX Values	1.0;
# Synthetic b-values	1
Synthetic b-value	1000.0;
CONTRAST	
Contrast Yes/No	No

Ax T2 FRFSE- Fast - Ax T2 FRFSE- Fast

Protocol: adult_spine_Ultrafast 3 part w spine

		· addit_opino_oniado
	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	FSE-XL
	Imaging Options	FC, EDR, TRF, Fast, ZIP512, FR, ARC
	Phase	2.00
	SCAN RANGE	
	FOV	32.0
	Slice Thickness	3.00
	Slice Spacing	0.3
	Overlap Locations	0
	Number of Slices	18
	ACQ TIMING	
냃	Freq	400
Fag	Phase	256
	Freq DIR	A/P
Z	Fat Shift DIR	Normal (P)
12	NEX	1.00
AG	Phase FOV	1.00
S-	Auto Shim	Auto
ast	Phase Correction	Yes
SAG T2 MID Fast - SAG T2 MID Fast	Flow Direction Compensation	Freq
Z	RF Drive Mode	Single
) T	Excitation Mode	Selective
SAC	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	3

SCAN TIMING		
Flip Angle	160	
TE	120.0	
Number of Echoes	120.0	
TR	5849.0	
	25	
Echo Train Length Receiver Bandwidth	27.78	
	27.70	
IMAGE ENHANCE		
Filter Choice	None	
USER CVS		
User CV12	1.00	
User CV15	0	
User CV18	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	
Multi b-values	1000.0;	
Multi NEX Values	1.0;	
# Synthetic b-values	1	
Synthetic b-value	1000.0;	
CONTRAST		
Contrast Yes/No	No	

SAG T2 MID Fast - SAG T2 MID Fast

Protocol: adult_spine_Ultrafast 3 part w spine

	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	FSE-XL
	Imaging Options	EDR, TRF, Fast, ZIP512, ARC
	Phase	2.00
	SCAN RANGE	
	FOV	32.0
	Slice Thickness	3.00
	Slice Spacing	0.3
	Overlap Locations	0
	Number of Slices	18
	ACQ TIMING	
	Freq	400
st	Phase	256
Fa	Freq DIR	A/P
₽	Fat Shift DIR	Normal (P)
Σ	NEX	1.00
Ļ	# of Acq. Before Pause	0
Saç	Phase FOV	1.00
1	Auto Shim	Auto
-as	Phase Correction	No
D	RF Drive Mode	Single
₹	Excitation Mode	Selective
Sag T1 MID Fast - Sag T1 MID Fast	FMRI	
sag	PSD Trigger	Internal
0,	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	3
	CONTRAST	
	Contrast Yes/No	No

SCAN TIMING	
Flip Angle	160
TE	Min Full
Number of Echoes	1
TR	430.0
Echo Train Length	4
Receiver Bandwidth	31.25
IMAGE ENHANCE	5.1.25
Filter Choice	None
Filler Choice	None
USER CVS	
User CV12	1.00
User CV18	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
Multi b-values	1000.0;
Multi NEX Values	1.0;
# Synthetic b-values	1
Synthetic b-value	1000.0;
TRACKER	
Tracker Length	200.0
Tracker Thickness	20.0

Sag T1 MID Fast - Sag T1 MID Fast

Protocol: adult_spine_Ultrafast 3 part w spine

	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	FSE-XL
	Imaging Options	FC, EDR, TRF, Fast, ZIP512, FR, ARC
	Phase	1.60
	SCAN RANGE	
	FOV	28.0
	Slice Thickness	3.00
	Slice Spacing	0.3
	Overlap Locations	0
	Number of Slices	18
	ACQ TIMING	
st	Freq	416
Fa	Phase	256
	Freq DIR	A/P
Ď	Fat Shift DIR	Normal (P)
T2	NEX	1.00
AG	Phase FOV	1.00
S	Auto Shim	Auto
ast	Phase Correction	Yes
SAG T2 BOT Fast - SAG T2 BOT Fast	Flow Direction Compensation	Freq
) M	RF Drive Mode	Single
T2	Excitation Mode	Selective
3AG	FMRI	
U	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	3

SCAN TIMING	
Flip Angle	160
TE	120.0
Number of Echoes	1
TR	6095.0
Echo Train Length	25
Receiver Bandwidth	27.78
IMAGE ENHANCE	
Filter Choice	None
USER CVS	
User CV12	1.00
User CV15	0
User CV18	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
Multi b-values	1000.0;
Multi NEX Values	1.0;
# Synthetic b-values	1
Synthetic b-value	1000.0;
CONTRAST	
Contrast Yes/No	No

SAG T2 BOT Fast - SAG T2 BOT Fast

Protocol: adult_spine_Ultrafast 3 part w spine

		<u> </u>
	IMAGING PARAMETERS	
	Imaging Mode	2D
	Pulse Sequence	FSE-XL
	Imaging Options	EDR, TRF, Fast, ZIP512, ARC
	Phase	2.00
	SCAN RANGE	
	FOV	28.0
	Slice Thickness	3.00
	Slice Spacing	0.3
	Overlap Locations	0
	Number of Slices	18
	ACQ TIMING	
	Freq	384
st	Phase	256
Fa	Freq DIR	A/P
ОТ	Fat Shift DIR	Normal (P)
<u>m</u>	NEX	1.00
Ţ	# of Acq. Before Pause	0
Saç	Phase FOV	1.00
(-)	Auto Shim	Auto
-as	Phase Correction	No
T	RF Drive Mode	Single
BC	Excitation Mode	Selective
Sag T1 BOT Fast - Sag T1 BOT Fast	FMRI	
sag	PSD Trigger	Internal
0)	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	3
	CONTRAST	
	Contrast Yes/No	No

SCAN TIMING	
Flip Angle	160
TE	Min Full
Number of Echoes	1
TR	585.0
Echo Train Length	5
Receiver Bandwidth	25.00
IMAGE ENHANCE	
Filter Choice	None
USER CVS	
User CV12	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
Multi b-values	1000.0;
Multi NEX Values	1.0;
# Synthetic b-values	1
Synthetic b-value	1000.0;
TRACKER	
Tracker Length	200.0
Tracker Thickness	20.0

Sag T1 BOT Fast - Sag T1 BOT Fast

Protocol: adult_spine_Ultrafast 3 part w spine

		<u> </u>		
	IMAGING PARAMETERS			
	Imaging Mode	2D		
	Pulse Sequence	FSE-XL		
	Imaging Options	FC, EDR, TRF, Fast, FR, ARC		
	Phase	2.00		
	SCAN RANGE			
	FOV	19.0		
	Slice Thickness	3.50		
	Slice Spacing	0.3		
	Overlap Locations	0		
	Number of Slices	27		
red	ACQ TIMING			
qui	Freq	320		
e le	Phase	256		
<u> </u>	Freq DIR	A/P		
FSE	Fat Shift DIR	Normal (A)		
Ax T2 FRFSE- if required - Ax T2 FRFSE- if required	NEX	1.00		
	Phase FOV	1.00		
	Auto Shim	Auto		
/ - K	Phase Correction	Yes		
uired	Flow Direction Compensation	Slice		
rec	RF Drive Mode	Single		
# .b	Excitation Mode	Selective		
-SE	FMRI			
-R	PSD Trigger	Internal		
2	View Order	Bottom/Up		
×	# of Repetitions REST	0		
4	# of Repetitions ACTIVE	0		
	SAT			
	Tag Type	None		
	TRICKS			
	Pause On/Off	On		
	Auto Subtract	0		
	Auto SCIC	3		
		-		

SCAN TIMING				
Flip Angle	160			
TE	88.0			
Number of Echoes	1			
TR	5844.0			
Echo Train Length	19			
Receiver Bandwidth	27.78			
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			
Multi b-values	1000.0;			
Multi NEX Values	1.0;			
# Synthetic b-values	1			
Synthetic b-value	1000.0;			
CONTRAST				
Contrast Yes/No	No			

Ax T2 FRFSE- if required - Ax T2 FRFSE- if required

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	IMAGING PARAMETERS		SCAN TIMING		
	Imaging Mode	2D	Flip Angle	160	
	Pulse Sequence	FSE-XL	TE	120.0	
	Imaging Options	FC, Seq, EDR, TRF, Fast,	Number of Echoes	1	
	Phase	ZIP512, FR, ARC, IrP 2.00	TR	4190.0	
		2.00	TI	150	
	SCAN RANGE		Echo Train Length	25	
	FOV	28.0	Receiver Bandwidth	27.78	
	Slice Thickness	3.00	IMAGE ENHANCE		
	Slice Spacing	0.3	Filter Choice	None	
	Overlap Locations	0	USER CVS		
	Number of Slices	18	User CV12	1.00	
T Fast	ACQ TIMING		User CV15	0	
	Freq	416	User CV18	1.00	asi
	Phase	256	TR Min	2500.0	1
BOT	Freq DIR	A/P	TR Max	11000.0	ВО
STIR	Fat Shift DIR	Normal (P)	User CV30	1.00	꼺
BOT Fast - SAG ST	NEX	1.00	User CV39	1.00	ST
	Phase FOV	1.00	User CV Mask2	256	٩G
	Auto Shim	Auto	MULTI-PHASE		. S
	Phase Correction	Yes	Seperate Series	0	ast
	Flow Direction Compensation	Freq	Mask Phase	0	. Fa
	RF Drive Mode	Single	Mask Pause	0	OT
e C	Excitation Mode	Selective	Preserve	0	S B
STIR		Goodave		Ü	STIR BOT Fast - SAG STIR BOT Fast
භ ල	FMRI		DIFFUSION		G
SAG	PSD Trigger	Internal	Recon All Images	On	SAG
	View Order	Bottom/Up	Multi b-values	1000.0;	
	# of Repetitions REST	0	Multi NEX Values	1.0;	
	# of Repetitions ACTIVE	0	# Synthetic b-values	1	
	SAT		Synthetic b-value	1000.0;	
	Tag Type	None	CONTRAST	**	
	TRICKS		Contrast Yes/No	No	
	Pause On/Off	On			
	Auto Subtract	0			
	Auto SCIC	3			