

\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\3 Plane Localizer

TA: 12 sec Coil Selection: Auto Voxel Size: 1.5×1.5×8.0 mm³ Acc.: None Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	1
Distance Factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	2
Slices	1
Distance Factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	3
Slices	1
Distance Factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	280 mm
FoV Phase	100.0 %
Slice Thickness	8.0 mm
TR	20.0 ms
TE	5.00 ms
Averages	1
Concatenations	3
AutoAlign	---

Contrast - Common

TR	20.0 ms
TE	5.00 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	40 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
SWI	Off
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	280 mm
FoV Phase	100.0 %
Slice Thickness	8.0 mm
Base Resolution	192
Phase Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration mode	None
Deep Resolve	Off
Phase Partial Fourier	Off
Asymmetric Echo	Off

Resolution - Filter

Raw Filter	On
Elliptical Filter	Off
POCS	Off
Distortion Correction	2D
Normalize	Image Based
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	1
Distance Factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	2
Slices	1
Distance Factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	3
Slices	1
Distance Factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	280 mm
FoV Phase	100.0 %
Slice Thickness	8.0 mm
TR	20.0 ms
Multi-Slice Mode	Sequential
Series	Ascending
Concatenations	3

Geometry - AutoAlign

Slice Group	1
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	2
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	3
Position	Isocenter

Geometry - AutoAlign

Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	Transversal
Initial Rotation	0.00 deg

Geometry - Saturation

Saturation Mode	Standard
Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	20.0 ms
Segments	1
Concatenations	3

Physio - Cardiac

Tagging	None
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Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	280 mm
FoV Phase	100.0 %
Phase Resolution	100 %

Physio - PACE

Resp. Control	Off
Concatenations	3

Inline - Liver

Liver Registration	Off
Save Original Images	On

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Soft Tissue

Wash-in	Off
Wash-out	Off
TTP	Off
PEI	Off
MIP Time	Off
Measurements	1

Inline - Composing

Inline Composing	Off
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Inline - MapIt

MapIt	None
Flip Angle	40 deg
Measurements	1
Contrasts	1
TE	5.00 ms
TR	20.0 ms
Save Original Images	On

Sequence - Part 1

Sequence Name	fl
Dimension	2D
Excitation	Slice-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	180 Hz/Px
Asymmetric Echo	Off
Segments	1

Sequence - Part 2

Introduction	Off
RF Spoiling	On
Acoustic noise reduction	Off

Sequence - Assistant

SAR Assistant	Off
Allowed Delay	0 s

**\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Accelerated Sagittal MPRAGE (MSV2
1)**

TA: 5:12 min Coil Selection: Auto Voxel Size: 1.0×1.0×1.0 mm³ Acc.: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	208
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FoV Read	256 mm
FoV Phase	93.8 %
Slice Thickness	1.0 mm
TR	2300.0 ms
TE	2.98 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	2300.0 ms
TE	2.98 ms
Magn. Preparation	Non-sel. IR
TI	900 ms
Flip Angle	9 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement
Reordering	Linear

Resolution - Common

FoV Read	256 mm
FoV Phase	93.8 %
Slice Thickness	1.0 mm
Base Resolution	256
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	Integrated
Acceleration Factor PE	2
Reference Lines PE	32
Acceleration Factor 3D	1
Phase Partial Fourier	Off
Slice Partial Fourier	Off
Asymmetric Echo	Off
Elliptical Scanning	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	3D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	208
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FoV Read	256 mm
FoV Phase	93.8 %
Slice Thickness	1.0 mm
TR	2300.0 ms
Multi-Slice Mode	Single Shot
Series	Ascending
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P5.4 H0.4
L	0.0 mm
P	5.4 mm
H	0.4 mm
Initial Orientation	Sagittal
Initial Rotation	0.00 deg

Geometry - Navigator**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
MSMA	S - C - T

System - Miscellaneous

Sagittal	L >> R
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Rotation	0.00 deg
A >> P	240 mm
F >> H	256 mm
R >> L	208 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	2300.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	Non-sel. IR
TI	900 ms
Dark Blood	Off
FoV Read	256 mm
FoV Phase	93.8 %
Phase Resolution	100 %

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On

Inline - MIP

MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off
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Inline - MapIt

MapIt	None
Flip Angle	9 deg
Measurements	1
TE	2.98 ms
TR	2300.0 ms
Save Original Images	On

Sequence - Part 1

Sequence Name	tfl
Dimension	3D
Excitation	Non-sel.
RF Pulse Type	Fast
Gradient Mode	Normal
Flow Compensation	None
Reordering	Linear
Bandwidth	240 Hz/Px
Echo Spacing	7.14 ms
Asymmetric Echo	Off
Turbo Factor	208

Sequence - Part 2

Introduction	On
RF Spoiling	On
Incr. Gradient Spoiling	Off

Sequence - Assistant

SAR Assistant	Off
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\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Sagittal 3D FLAIR (MSV22)

TA: 6:37 min Coil Selection: Auto Voxel Size: 1.0×1.0×1.0 mm³ Acc.: 2 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	208
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FoV Read	256 mm
FoV Phase	93.8 %
Slice Thickness	1.00 mm
TR	5000.0 ms
TE	393.00 ms
Averages	1.0
Concatenations	1
AutoAlign	---

Contrast - Common

TR	5000.0 ms
TE	393.00 ms
MTC	Off
Magn. Preparation	Non-sel. T2-IR
T1 1	1800 ms
Flip Angle Mode	T2 Var
Fat-Water Contrast	Fat Saturation
Fat Saturation	Strong
Dark Blood	Off
Blood Suppression	Off
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement
Reordering	Linear

Resolution - Common

FoV Read	256 mm
FoV Phase	93.8 %
Slice Thickness	1.00 mm
Base Resolution	256
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration mode	GRAPPA
Total Factor	2
Reference Scans	Integrated
Acceleration Factor PE	2
Reference Lines PE	28
Acceleration Factor 3D	1
Phase Partial Fourier	Allowed
Slice Partial Fourier	7/8
Elliptical Scanning	Off

Resolution - Filter

Raw Filter	On
Elliptical Filter	Off
Distortion Correction	3D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	208
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FoV Read	256 mm
FoV Phase	93.8 %
Slice Thickness	1.00 mm
TR	5000.0 ms
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P5.4 H0.4
L	0.0 mm
P	5.4 mm
H	0.4 mm
Initial Orientation	Sagittal
Initial Rotation	0.00 deg

Geometry - Navigator**Geometry - Saturation**

Special Saturation	None
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
MSMA	S - C - T
Sagittal	L >> R

System - Miscellaneous

Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Rotation	0.00 deg
A >> P	240 mm
F >> H	256 mm
R >> L	208 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
Trigger Delay	0 ms
TR	5000.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Fat Saturation
Magn. Preparation	Non-sel. T2-IR
TI 1	1800 ms
Dark Blood	Off
FoV Read	256 mm
FoV Phase	93.8 %
Phase Resolution	100 %

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On

Inline - MIP

MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off
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Sequence - Part 1

Sequence Name	spcir
Dimension	3D
Excitation	Non-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	None
Reordering	Linear
Bandwidth	781 Hz/Px
Echo Spacing	3.42 ms
Turbo Factor	312
Echo Train Duration	923 ms

Sequence - Part 2

Introduction	On
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Sequence - Assistant

SAR Assistant	Off
Allowed Delay	30 s

\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Sagittal 3D T2 SPACE (MSV21)

TA: 4:50 min Coil Selection: Auto Voxel Size: 1.0×1.0×1.0 mm³ Acc.: 2 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	1st Segment
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	208
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FoV Read	256 mm
FoV Phase	93.8 %
Slice Thickness	1.00 mm
TR	3200.0 ms
TE	564.00 ms
Averages	1.0
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3200.0 ms
TE	564.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle Mode	T2 Var
Fat-Water Contrast	Standard
Dark Blood	Off
Blood Suppression	Off
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement
Reordering	Linear

Resolution - Common

FoV Read	256 mm
FoV Phase	93.8 %
Slice Thickness	1.00 mm
Base Resolution	256
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration mode	GRAPPA
Total Factor	2
Reference Scans	Integrated
Acceleration Factor PE	2
Reference Lines PE	32
Acceleration Factor 3D	1
Phase Partial Fourier	Allowed
Slice Partial Fourier	Off
Elliptical Scanning	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	3D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	208
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FoV Read	256 mm
FoV Phase	93.8 %
Slice Thickness	1.00 mm
TR	3200.0 ms
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P5.4 H0.4
L	0.0 mm
P	5.4 mm
H	0.4 mm
Initial Orientation	Sagittal
Initial Rotation	0.00 deg

Geometry - Navigator**Geometry - Saturation**

Special Saturation	None
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
MSMA	S - C - T
Sagittal	L >> R

System - Miscellaneous

Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
Trigger Delay	0 ms
TR	3200.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	256 mm
FoV Phase	93.8 %
Phase Resolution	100 %

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off

Inline - MIP

MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off
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Sequence - Part 1

Sequence Name	spc
Dimension	3D
Excitation	Non-sel.
RF Pulse Type	Fast
Gradient Mode	Fast
Flow Compensation	None
Reordering	Linear
Bandwidth	751 Hz/Px
Echo Spacing	3.46 ms
Turbo Factor	314
Echo Train Duration	1083 ms

Sequence - Part 2

Introduction	On
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Sequence - Assistant

SAR Assistant	Off
Allowed Delay	30 s

\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Axial 3D ME T2 GRE (MSV21)

TA: 8:44 min Coil Selection: Auto Voxel Size: 0.5×0.5×1.8 mm³ Acc.: 2 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	3rd Segment
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Distance Factor	20 %
Position	L0.0 A12.2 H0.4 mm
Orientation	Transversal
Phase Encoding Dir.	R >> L
Slices per Slab	88
Phase Oversampling	0 %
Slice Oversampling	9.1 %
FoV Read	200 mm
FoV Phase	100.0 %
Slice Thickness	1.8 mm
TR	37.0 ms
TE 1	6.71 ms
TE 2	10.62 ms
TE 3	14.53 ms
TE 4	18.44 ms
TE 5	22.35 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	37.0 ms
TE 1	6.71 ms
TE 2	10.62 ms
TE 3	14.53 ms
TE 4	18.44 ms
TE 5	22.35 ms
MTC	Off
Magn. Preparation	None
Flip Angle	15 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	5
SWI	Off
Reconstruction	Magn./Phase

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	200 mm
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Resolution - Common

FoV Phase	100.0 %
Slice Thickness	1.8 mm
Base Resolution	384
Phase Resolution	70 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	Integrated
Acceleration Factor PE	2
Reference Lines PE	24
Acceleration Factor 3D	1
Deep Resolve	Off
Phase Partial Fourier	Off
Slice Partial Fourier	Off
Asymmetric Echo	Off
Elliptical Scanning	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
POCS	Off
Distortion Correction	3D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Distance Factor	20 %
Position	L0.0 A12.2 H0.4 mm
Orientation	Transversal
Phase Encoding Dir.	R >> L
Slices per Slab	88
Phase Oversampling	0 %
Slice Oversampling	9.1 %
FoV Read	200 mm
FoV Phase	100.0 %
Slice Thickness	1.8 mm
TR	37.0 ms
Multi-Slice Mode	Sequential
Series	Ascending
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.0 A12.2 H0.4 mm
Orientation	Transversal
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	L0.0 A12.2 H0.4
R	0.0 mm
A	12.2 mm
H	0.4 mm
Initial Orientation	Transversal
Initial Rotation	90.00 deg

Geometry - Saturation

Saturation Mode	Standard
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Geometry - Saturation

Special Saturation	Tracking F
Gap	11.00 mm
Thickness	40.00 mm

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L0.0 A12.2 H0.4 mm
Orientation	Transversal
Rotation	90.00 deg
R >> L	200 mm
A >> P	200 mm
F >> H	159 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	37.0 ms
Segments	1
Concatenations	1

Physio - Cardiac

Tagging	None
Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	200 mm
FoV Phase	100.0 %
Phase Resolution	70 %

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Liver

Liver Registration	Off
Save Original Images	On

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Soft Tissue

Wash-in	Off
Wash-out	Off
TTP	Off
PEI	Off
MIP Time	Off
Measurements	1

Inline - Composing

Inline Composing	Off
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Inline - MapIt

MapIt	None
Flip Angle	15 deg
Measurements	1
Contrasts	5
TE 1	6.71 ms
TE 2	10.62 ms
TE 3	14.53 ms
TE 4	18.44 ms
TE 5	22.35 ms
TR	37.0 ms
Save Original Images	On

Sequence - Part 1

Sequence Name	fl_r
Dimension	3D
Excitation	Slab-sel.
RF Pulse Type	Fast
Readout Mode	Bipolar
Gradient Mode	Normal
Flow Compensation 1	On
Flow Compensation 2	None
Flow Compensation 3	None
Flow Compensation 4	None
Flow Compensation 5	None
Bandwidth 1	280 Hz/Px
Bandwidth 2	280 Hz/Px
Bandwidth 3	280 Hz/Px
Bandwidth 4	280 Hz/Px
Bandwidth 5	280 Hz/Px
Asymmetric Echo	Off
Segments	1

Sequence - Part 2

Introduction	On
RF Spoiling	On
Acoustic noise reduction	Off

Sequence - Assistant

SAR Assistant	Flip Angle
Min Flip Angle	90 deg
Allowed Delay	30 s

\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Axial 3D pCASL 1260 (Eyes Open) (M SV24)

TA: 1:08 min Coil Selection: Manual Voxel Size: 1.8x1.8x4.0 mm³ Acc.: 3 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Slices per Slab	42
Phase Oversampling	0 %
Slice Oversampling	25.0 %
FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm
TR	5110.0 ms
TE	16.60 ms
Averages	1
Concatenations	1
AutoAlign	Head > Brain
Coil Elements	HC1-7

Contrast - Common

TR	5110.0 ms
TE	16.60 ms
Flip Angle	180 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off
Delay in TR	0.00 ms
Reordering	Centric

Contrast - ASL

Perfusion Mode	PCASL
Suppression	Gray-White
Labeling Duration	1800 ms
Postlabeling Delay	1260 ms
Delay Array Size	1

Resolution - Common

FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm

Resolution - Common

Base Resolution	66
Phase Resolution	95 %
Interpolation	On

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	GRE/Separate
Acceleration Factor PE	3
Reference Lines PE	24
Acceleration Factor 3D	1
Reference Lines 3D	24
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Hamming	Off
Distortion Correction	3D
Normalize	Prescan

Geometry - Common

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Slices per Slab	42
Phase Oversampling	0 %
Slice Oversampling	25.0 %
FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm
TR	5110.0 ms
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L0.7 P32.1 F7.4
L	0.7 mm
P	32.1 mm
F	7.4 mm
Initial Orientation	Transversal
Initial Rotation	-180.00 deg

Geometry - Saturation

Special Saturation	Parallel F
Gap	50.00 mm

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Manual
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Rotation	180.00 deg
A >> P	240 mm
R >> L	240 mm
F >> H	168 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	5110.0 ms
Segments	4
Concatenations	1

Sequence - Part 1

Sequence Name	tgse
Dimension	3D
RF Pulse Type	Normal
Gradient Mode	Performance
Reordering	Centric
Bandwidth	3444 Hz/Px
Echo Spacing	0.54 ms
Turbo Factor	13
Segments	4
EPI Factor	21

Sequence - Part 2

Introduction	Off
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Sequence - Assistant

SAR Assistant	Off
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\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Axial 3D pCASL 1500 (Eyes Open) (M SV24)

TA: 1:08 min Coil Selection: Manual Voxel Size: 1.8x1.8x4.0 mm³ Acc.: 3 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Slices per Slab	42
Phase Oversampling	0 %
Slice Oversampling	25.0 %
FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm
TR	5110.0 ms
TE	16.60 ms
Averages	1
Concatenations	1
AutoAlign	Head > Brain
Coil Elements	HC1-7

Contrast - Common

TR	5110.0 ms
TE	16.60 ms
Flip Angle	180 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off
Delay in TR	0.00 ms
Reordering	Centric

Contrast - ASL

Perfusion Mode	PCASL
Suppression	Gray-White
Labeling Duration	1800 ms
Postlabeling Delay	1500 ms
Delay Array Size	1

Resolution - Common

FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm

Resolution - Common

Base Resolution	66
Phase Resolution	95 %
Interpolation	On

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	GRE/Separate
Acceleration Factor PE	3
Reference Lines PE	24
Acceleration Factor 3D	1
Reference Lines 3D	24
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Hamming	Off
Distortion Correction	3D
Normalize	Prescan

Geometry - Common

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Slices per Slab	42
Phase Oversampling	0 %
Slice Oversampling	25.0 %
FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm
TR	5110.0 ms
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L0.7 P32.1 F7.4
L	0.7 mm
P	32.1 mm
F	7.4 mm
Initial Orientation	Transversal
Initial Rotation	-180.00 deg

Geometry - Saturation

Special Saturation	Parallel F
Gap	50.00 mm

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Manual
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Rotation	180.00 deg
A >> P	240 mm
R >> L	240 mm
F >> H	168 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	5110.0 ms
Segments	4
Concatenations	1

Sequence - Part 1

Sequence Name	tgse
Dimension	3D
RF Pulse Type	Normal
Gradient Mode	Performance
Reordering	Centric
Bandwidth	3444 Hz/Px
Echo Spacing	0.54 ms
Turbo Factor	13
Segments	4
EPI Factor	21

Sequence - Part 2

Introduction	Off
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Sequence - Assistant

SAR Assistant	Off
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\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Axial 3D pCASL 2000 (Eyes Open) (M SV24)

TA: 1:08 min Coil Selection: Manual Voxel Size: 1.8x1.8x4.0 mm³ Acc.: 3 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Slices per Slab	42
Phase Oversampling	0 %
Slice Oversampling	25.0 %
FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm
TR	5110.0 ms
TE	16.60 ms
Averages	1
Concatenations	1
AutoAlign	Head > Brain
Coil Elements	HC1-7

Contrast - Common

TR	5110.0 ms
TE	16.60 ms
Flip Angle	180 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off
Delay in TR	0.00 ms
Reordering	Centric

Contrast - ASL

Perfusion Mode	PCASL
Suppression	Gray-White
Labeling Duration	1800 ms
Postlabeling Delay	2000 ms
Delay Array Size	1

Resolution - Common

FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm

Resolution - Common

Base Resolution	66
Phase Resolution	95 %
Interpolation	On

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	GRE/Separate
Acceleration Factor PE	3
Reference Lines PE	24
Acceleration Factor 3D	1
Reference Lines 3D	24
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Hamming	Off
Distortion Correction	3D
Normalize	Prescan

Geometry - Common

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Slices per Slab	42
Phase Oversampling	0 %
Slice Oversampling	25.0 %
FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm
TR	5110.0 ms
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L0.7 P32.1 F7.4
L	0.7 mm
P	32.1 mm
F	7.4 mm
Initial Orientation	Transversal
Initial Rotation	-180.00 deg

Geometry - Saturation

Special Saturation	Parallel F
Gap	50.00 mm

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Manual
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Rotation	180.00 deg
A >> P	240 mm
R >> L	240 mm
F >> H	168 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	5110.0 ms
Segments	4
Concatenations	1

Sequence - Part 1

Sequence Name	tgse
Dimension	3D
RF Pulse Type	Normal
Gradient Mode	Performance
Reordering	Centric
Bandwidth	3444 Hz/Px
Echo Spacing	0.54 ms
Turbo Factor	13
Segments	4
EPI Factor	21

Sequence - Part 2

Introduction	Off
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Sequence - Assistant

SAR Assistant	Off
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\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Axial 3D pCASL 2500 (Eyes Open) (M SV24)

TA: 1:08 min Coil Selection: Manual Voxel Size: 1.8x1.8x4.0 mm³ Acc.: 3 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Slices per Slab	42
Phase Oversampling	0 %
Slice Oversampling	25.0 %
FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm
TR	5110.0 ms
TE	16.60 ms
Averages	1
Concatenations	1
AutoAlign	Head > Brain
Coil Elements	HC1-7

Contrast - Common

TR	5110.0 ms
TE	16.60 ms
Flip Angle	180 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off
Delay in TR	0.00 ms
Reordering	Centric

Contrast - ASL

Perfusion Mode	PCASL
Suppression	Gray-White
Labeling Duration	1800 ms
Postlabeling Delay	2500 ms
Delay Array Size	1

Resolution - Common

FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm

Resolution - Common

Base Resolution	66
Phase Resolution	95 %
Interpolation	On

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	GRE/Separate
Acceleration Factor PE	3
Reference Lines PE	24
Acceleration Factor 3D	1
Reference Lines 3D	24
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Hamming	Off
Distortion Correction	3D
Normalize	Prescan

Geometry - Common

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Slices per Slab	42
Phase Oversampling	0 %
Slice Oversampling	25.0 %
FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm
TR	5110.0 ms
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L0.7 P32.1 F7.4
L	0.7 mm
P	32.1 mm
F	7.4 mm
Initial Orientation	Transversal
Initial Rotation	-180.00 deg

Geometry - Saturation

Special Saturation	Parallel F
Gap	50.00 mm

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Manual
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Rotation	180.00 deg
A >> P	240 mm
R >> L	240 mm
F >> H	168 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	5110.0 ms
Segments	4
Concatenations	1

Sequence - Part 1

Sequence Name	tgse
Dimension	3D
RF Pulse Type	Normal
Gradient Mode	Performance
Reordering	Centric
Bandwidth	3444 Hz/Px
Echo Spacing	0.54 ms
Turbo Factor	13
Segments	4
EPI Factor	21

Sequence - Part 2

Introduction	Off
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Sequence - Assistant

SAR Assistant	Off
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\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Axial 3D pCASL 3000 (Eyes Open) (M SV24)

TA: 1:08 min Coil Selection: Manual Voxel Size: 1.8x1.8x4.0 mm³ Acc.: 3 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Slices per Slab	42
Phase Oversampling	0 %
Slice Oversampling	25.0 %
FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm
TR	5110.0 ms
TE	16.60 ms
Averages	1
Concatenations	1
AutoAlign	Head > Brain
Coil Elements	HC1-7

Contrast - Common

TR	5110.0 ms
TE	16.60 ms
Flip Angle	180 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off
Delay in TR	0.00 ms
Reordering	Centric

Contrast - ASL

Perfusion Mode	PCASL
Suppression	Gray-White
Labeling Duration	1800 ms
Postlabeling Delay	3000 ms
Delay Array Size	1

Resolution - Common

FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm

Resolution - Common

Base Resolution	66
Phase Resolution	95 %
Interpolation	On

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	GRE/Separate
Acceleration Factor PE	3
Reference Lines PE	24
Acceleration Factor 3D	1
Reference Lines 3D	24
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Hamming	Off
Distortion Correction	3D
Normalize	Prescan

Geometry - Common

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Slices per Slab	42
Phase Oversampling	0 %
Slice Oversampling	25.0 %
FoV Read	240 mm
FoV Phase	100.0 %
Slice Thickness	4.0 mm
TR	5110.0 ms
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L0.7 P32.1 F7.4
L	0.7 mm
P	32.1 mm
F	7.4 mm
Initial Orientation	Transversal
Initial Rotation	-180.00 deg

Geometry - Saturation

Special Saturation	Parallel F
Gap	50.00 mm

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Manual
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	L0.7 P32.1 F7.4 mm
Orientation	Transversal
Rotation	180.00 deg
A >> P	240 mm
R >> L	240 mm
F >> H	168 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	5110.0 ms
Segments	4
Concatenations	1

Sequence - Part 1

Sequence Name	tgse
Dimension	3D
RF Pulse Type	Normal
Gradient Mode	Performance
Reordering	Centric
Bandwidth	3444 Hz/Px
Echo Spacing	0.54 ms
Turbo Factor	13
Segments	4
EPI Factor	21

Sequence - Part 2

Introduction	Off
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Sequence - Assistant

SAR Assistant	Off
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\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Axial MB Level 2 dMRI PA (MSV25)

TA: 6:14 min Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 6 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	81
Distance Factor	0 %
Position	R9.3 P27.4 F32.7 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Phase Oversampling	0 %
FoV Read	232 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3500.0 ms
TE	91.00 ms
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3500.0 ms
TE	91.00 ms
MTC	Off
Magn. Preparation	None
Fat-Water Contrast	Fat Saturation
Fat Saturation	Strong
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Multiple Series	Off
Delay in TR	0.00 ms

Resolution - Common

FoV Read	232 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	116
Phase Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	EPI/Separate
Acceleration Factor PE	2
Reference Lines PE	12
SMS Factor	3
Phase Partial Fourier	6/8

Resolution - Filter

Raw Filter	On
Elliptical Filter	Off
Distortion Correction	Off
Static Field Correction	Off
Normalize	Prescan
Noise Masking	Off

Geometry - Common

Slice Group	1
Slices	81
Distance Factor	0 %
Position	R9.3 P27.4 F32.7 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Phase Oversampling	0 %
FoV Read	232 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3500.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R9.3 P27.4 F32.7 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
AutoAlign	---
Initial Position	R9.3 P27.4 F32.7
R	9.3 mm
P	27.4 mm
F	32.7 mm
Initial Orientation	Transversal
Initial Rotation	180.00 deg

Geometry - Navigator**Geometry - Saturation**

Special Saturation	None
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Performance
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard

System - Adjustments

B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

Sequence - Part 2

Introduction	Off
Phase Correction	Internal

Sequence - Assistant

SAR Assistant	Off
Optimization	None

System - Adjust Volume

Position	R9.3 P27.4 F32.7 mm
Orientation	Transversal
Rotation	-180.00 deg
A >> P	232 mm
R >> L	232 mm
F >> H	162 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	3.000

Physio - Signal

1st Signal/Mode	None
TR	3500.0 ms
Concatenations	1

Physio - PACE

Resp. Control	Off
Concatenations	1

Diff

Diffusion Mode	Free
Diff. Directions	99
Diffusion Scheme	Monopolar
Diff. Weightings	2
b-value 1	0 s/mm ²
b-value 2	2000 s/mm ²
Averages 1	1
Averages 2	1
Dynamic Field Correction	Off
Invert Gray Scale	Off
Diff. Weighted Images	On
Trace Weighted Images	On
Tensor	On
FA Maps	On
ADC Maps	On
Exponential ADC Maps	Off
ADC Noise Threshold	10
Noise Masking	Off
Calculated Image	Off

Sequence - Part 1

Sequence Name	epse
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Fast
Bandwidth	1724 Hz/Px
Echo Spacing	0.66 ms
Free Echo Spacing	Off
Optimization	None
EPI Factor	116

\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Axial MB Level 2 dMRI AP (MSV25)

TA: 48 sec Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 6 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	81
Distance Factor	0 %
Position	R9.3 P27.4 F32.7 mm
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	232 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3500.0 ms
TE	91.00 ms
Concatenations	1
AutoAlign	---

Contrast - Common

TR	3500.0 ms
TE	91.00 ms
MTC	Off
Magn. Preparation	None
Fat-Water Contrast	Fat Saturation
Fat Saturation	Strong
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Multiple Series	Off
Delay in TR	0.00 ms

Resolution - Common

FoV Read	232 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	116
Phase Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	EPI/Separate
Acceleration Factor PE	2
Reference Lines PE	12
SMS Factor	3
Phase Partial Fourier	6/8

Resolution - Filter

Raw Filter	On
Elliptical Filter	Off
Distortion Correction	Off
Static Field Correction	Off
Normalize	Prescan
Noise Masking	Off

Geometry - Common

Slice Group	1
Slices	81
Distance Factor	0 %
Position	R9.3 P27.4 F32.7 mm
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	232 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3500.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R9.3 P27.4 F32.7 mm
Orientation	Transversal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R9.3 P27.4 F32.7
R	9.3 mm
P	27.4 mm
F	32.7 mm
Initial Orientation	Transversal
Initial Rotation	180.00 deg

Geometry - Navigator**Geometry - Saturation**

Special Saturation	None
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	33 mm
Table Position	F
Inline Composing	Off

System - Miscellaneous

Coil Selection	ACS All but spine
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Performance
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard

System - Adjustments

B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R9.3 P27.4 F32.7 mm
Orientation	Transversal
Rotation	0.00 deg
A >> P	232 mm
R >> L	232 mm
F >> H	162 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	3.000

Physio - Signal

1st Signal/Mode	None
TR	3500.0 ms
Concatenations	1

Physio - PACE

Resp. Control	Off
Concatenations	1

Diff

Diffusion Mode	Free
Diff. Directions	6
Diffusion Scheme	Monopolar
Diff. Weightings	2
b-value 1	0 s/mm ²
b-value 2	2000 s/mm ²
Averages 1	1
Averages 2	1
Dynamic Field Correction	Off
Invert Gray Scale	Off
Diff. Weighted Images	On
Trace Weighted Images	On
Tensor	On
FA Maps	On
ADC Maps	On
Exponential ADC Maps	Off
ADC Noise Threshold	10
Noise Masking	Off
Calculated Image	Off

Sequence - Part 1

Sequence Name	epse
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Fast
Bandwidth	1724 Hz/Px
Echo Spacing	0.66 ms
Free Echo Spacing	Off
Optimization	None
EPI Factor	116

Sequence - Part 2

Introduction	Off
Phase Correction	Internal

Sequence - Assistant

SAR Assistant	Off
Optimization	None

\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\Axial MB rsfMRI (Eyes Open) (MSV21)

TA: 5:00 min Coil Selection: Auto Voxel Size: 2.5×2.5×2.5 mm³ Acc:: 8 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	64
Distance Factor	0 %
Position	R4.7 P24.1 F34.1 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Phase Oversampling	0 %
FoV Read	220 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	607.0 ms
TE	32.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	607.0 ms
TE	32.00 ms
MTC	Off
Flip Angle	50 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	482
Delay in TR	0.00 ms

Resolution - Common

FoV Read	220 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
Base Resolution	88
Phase Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration mode	SMS
Reference Scans	EPI/Separate
Acceleration Factor PE	1
SMS Factor	8
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Hamming	Off
Distortion Correction	Off
Static Field Correction	Off
Normalize	Off

Geometry - Common

Slice Group	1
Slices	64
Distance Factor	0 %
Position	R4.7 P24.1 F34.1 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
Phase Oversampling	0 %
FoV Read	220 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	607.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	R4.7 P24.1 F34.1 mm
Orientation	Transversal
Phase Encoding Dir.	P >> A
AutoAlign	---
Initial Position	R4.7 P24.1 F34.1
R	4.7 mm
P	24.1 mm
F	34.1 mm
Initial Orientation	Transversal
Initial Rotation	-180.00 deg

Geometry - Saturation

Special Saturation	None
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Performance
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off

System - Adjustments

Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	R4.7 P24.1 F34.1 mm
Orientation	Transversal
Rotation	180.00 deg
A >> P	220 mm
R >> L	220 mm
F >> H	160 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	607.0 ms
Concatenations	1

BOLD

GLM Statistics	Off
Ignore Meas. at Start	0
Ignore After Transition	0
Model Transition States	On
Temp. Highpass Filter	On
Threshold	4.00
Paradigm Size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Baseline
Meas[12]	Baseline
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion Correction	Off
Spatial Filter	Off
Measurements	482
Delay in TR	0.00 ms

Sequence - Part 1

Sequence Name	epfid
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Performance
Bandwidth	2368 Hz/Px

Sequence - Part 1

Echo Spacing	0.57 ms
Free Echo Spacing	Off
EPI Factor	88

Sequence - Part 2

Introduction	Off
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Sequence - Assistant

SAR Assistant	Off
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\\Research\ADNI4_XA50_Adv_Skyra_20250506\ADNI4\Human\HighResHippocampus (MSV21)

TA: 4:18 min Coil Selection: Auto Voxel Size: 0.4×0.4×2.0 mm³ Acc.: 2 Rel. SNR: 1.00

Properties

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slice Group	1
Slices	30
Distance Factor	0 %
Position	Isocenter
Orientation	C > T-25.0
Phase Encoding Dir.	R >> L
Phase Oversampling	100 %
FoV Read	175 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	8020.0 ms
TE	50.00 ms
Averages	1
Concatenations	1
AutoAlign	---

Contrast - Common

TR	8020.0 ms
TE	50.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	122 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
Wrap-up Magn.	None
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FoV Read	175 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	448
Phase Resolution	100 %
Trajectory	Cartesian
Interpolation	Off

Resolution - Acceleration

Acceleration mode	GRAPPA
Reference Scans	Integrated

Resolution - Acceleration

Acceleration Factor PE	2
Reference Lines PE	34
Deep Resolve	Off
Phase Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	3D
Normalize	Prescan
Image Filter	Off

Geometry - Common

Slice Group	1
Slices	30
Distance Factor	0 %
Position	Isocenter
Orientation	C > T-25.0
Phase Encoding Dir.	R >> L
Phase Oversampling	100 %
FoV Read	175 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	8020.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice Group	1
Position	Isocenter
Orientation	C > T-25.0
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	C > T
C > T	-25.00
> S	0.00
Initial Rotation	0.00 deg

Geometry - Navigator

Geometry - Saturation

Special Saturation	None
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

System - Miscellaneous

Coil Selection	Auto Coil Select
Store Coil Selection	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

System - Miscellaneous

Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	Isocenter
Orientation	C > T-25.0
Rotation	0.00 deg
R >> L	175 mm
F >> H	175 mm
A >> P	60 mm
Reset	Off

System - Tx/Rx

Frequency 1H	123.216659 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	8020.0 ms
Concatenations	1

Physio - Cardiac

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	175 mm
FoV Phase	100.0 %
Phase Resolution	100 %
Trajectory	Cartesian
Motion Correction	None

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Motion Correction	None
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On

Inline - MIP

MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Composing

Inline Composing	Off
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Sequence - Part 1

Sequence Name	tse
Dimension	2D
RF Pulse Type	Fast
Gradient Mode	Normal
Flow Compensation	None
Bandwidth	100 Hz/Px
Echo Spacing	16.5 ms
Free Echo Spacing	Off
Define	Turbo Factor
Turbo Factor	15
Echo Trains per Slice	31

Sequence - Part 2

Introduction	On
Phase Correction	Automatic
Compensate T2 Decay	Off
Hyperecho	Off
WARP	Off
Red. EC Sensitivity	Off
Acoustic noise reduction	Off
Reduce Motion Sens.	Off
Motion Correction	None

Sequence - Assistant

SAR Assistant	Flip Angle
Min Flip Angle	130 deg
Allowed Delay	180 s