

1.5T ADNI GE 14.0 M4 Software, TwinSpeed Gradient and 8-channel Brain Coil

Set up the patient according to the ADNI instruction manual. Use the 8-channel brain coil.

Use the electronic ADNI protocol that has been loaded on your scanner.

NOTE: The "adni14m4" pulse sequence used for series 2 and 3 is a works in progress pulse sequence that ADNI sites obtain from GE Healthcare.

Accept the "First Operating Mode" pop-up in Series 1. Consult the scanner's user's manual to understand this choice and its implications.

SERIES	1. 3 plane loc.	scan plane	3-plane	matrix/nex	256 / 128 / 1
coil	8hrbrain	mode	(Whole Body gradient)	fov (cm)	26
etl		SAT		slice/space	5 / 5
scan time	:13			autoshim	On
comments	Use 8-channel brain coil.				

SERIES	2. Sag MPRAGE	scan plane	Sag	matrix/nex	192 / 192 / 1
coil	8hrbrain	mode	3D (ZOOM gradient)	phase fov	
	<i>SCAN TIMING</i>	pulse seq	SPGR	locs/pause	
#echos	1	image opts.	EDR, IrPrep, Fast	freq. direct.	S/I
te	min full	psd name	adni14m4	fc direct	
Prep time	1000		<i>ADDITIONAL PARAMETERS</i>	phase corr	
flip angle	8	User CVs	Image acq. delay = 0	autoshim	On
etl			turbo mode = 1		<i>SCANNING RANGE</i>
bw1/bw2	15.63		swap fat chem shift = 1	fov	24
scan time	7:42		slice resolution = 100%	slice/space	1.2mm 170 locs/slab
			mprage mode = 1		
			TD or mprageTR=2400		
comments	Cover skin to skin. Remind the patient to hold still for this scan.				

SERIES	3.MPRAGE-repeat	scan plane	Sag	matrix/nex	192 / 192 / 1
coil	8hrbrain	mode	3D (ZOOM gradient)	phase fov	
	<i>SCAN TIMING</i>	pulse seq	SPGR	locs/pause	
#echos	1	image opts.	EDR, IrPrep, Fast	freq. direct.	S/I
te	min full	psd name	adni14m4	fc direct	
Prep time	1000		<i>ADDITIONAL PARAMETERS</i>	phase corr	
flip angle	8	User CVs	Image acq. delay = 0	autoshim	Off
etl			turbo mode = 1		<i>SCANNING RANGE</i>
bw1/bw2	15.63		swap fat chem shift = 1	fov	24
scan time	7:42		slice resolution = 100%	slice/space	1.2mm 170 locs/slab
			mprage mode = 1		
			TD or mprageTR=2400		
comments	Prescribe same image locations as series 2, unless adjustment is needed (e.g. to correct for wrap). Remind the patient to hold still for this scan.				

NOTE: Be sure to select the "Copy FOV, Thickness, Spacing" button for the graphic prescription. Otherwise, if you copy the slice locations from series 2, the number of slices might be reduced.

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SERIES coil	4. Sag B1 Cal PA	scan plane mode	Sag	matrix/nex	128 / 128 / 1
	8hrbrain		3D (ZOOM gradient)		phase fov
	<i>SCAN TIMING</i>	pulse seq	GRE	locs/pause	
#echos	1	image opts.	EDR, Fast	freq. direct.	S/I
te	min full	psd name		fc direct	
tr			<i>ADDITIONAL PARAMETERS</i>	Auto Shim	On
flip angle	2				<i>SCANNING RANGE</i>
etl		User CVs	Image acq. delay = 0	fov	30
bw1/bw2	62.5		Turbo Mode = 1	slice/space	2.5mm locs/slab=96
scan time	:36		Slice resolution = 100%		
comments	Cover skin to skin.				

SERIES coil	5. Sag B1 Cal PA	scan plane mode	Sag	matrix/nex	128 / 128 / 1
	BODY		3D (ZOOM gradient)		phase fov
	<i>SCAN TIMING</i>	pulse seq	GRE	locs/pause	
#echos	1	image opts.	EDR, Fast	freq. direct.	S/I
te	min full	psd name		fc direct	
tr			<i>ADDITIONAL PARAMETERS</i>	Auto Shim	Off
flip angle	2				<i>SCANNING RANGE</i>
etl		User CVs	Image acq. delay=0	fov	30
bw1/bw2	62.5		Turbo Mode =1	slice/space	2.5mm locs/slab=96
scan time	:36		Slice resolution = 100%		
comments	Turn Body Coil on for this scan. Leave 8hrbrain coil plugged in, but accept change to Body Coil (In other words, select " Apply ".) Same image locations as series 4.				

SERIES coil	6. Ax PD/T2 FSE	scan plane mode	Ax	matrix/nex	256 / 256 / 1
	8hrbrain		2D (ZOOM gradient)		phase fov
	<i>SCAN TIMING</i>	pulse seq	FSE-XL	acqs/pause	0
#echoes	2	image opts.	EDR, Fast	freq. direct.	A/P
te	min full / TE2=100	psd name		fc direct	
TR	3000		<i>ADDITIONAL PARAMETERS</i>	Autoshim	Off
flip angle				phase corr	
etl	16	User CVs	blurring cancellation=0		<i>SCANNING RANGE</i>
bw1/bw2	20.83		Enh. fine line suppr.=0	fov	24
scan time	6:25			slice/space	48 loc, 3mm interleaved
comments	Accept change back to 8-channel Brain Coil. (In other words, select " Apply ".) Prescribe 48 slices to cover head.				

Series 6 is the final patient series.

Follow the ADNI instructions to complete the phantom scans.