

Table S.1: Results of the ANOVAs with two factors (Hemisphere, Method) and two Groups (aMCI, Controls) on the Right and Left hippocampal volumes.

	<i>F values(1,39)</i>	$\eta^2 p$	<i>p values</i>
<i>ROI-i vs. unmodulated ROI-t</i>			
<i>Main effects</i>			
Group	14.73	0.27	0.0004 *
Method	0.23	0.006	0.63
Hemispheric side	0.017	0.0004	0.90
<i>Method x Group interaction</i>	15.57	0.28	0.0003 *
<i>ROI-i vs. m_modulated ROI-t</i>			
<i>Main effects</i>			
Group	17.57	0.31	0.0001*
Method	0.14	0.003	0.71
Hemispheric side	0.02	0.0005	0.89
<i>Method x Group interaction</i>	9.36	0.19	0.004*
<i>ROI-i vs. m0_modulated ROI-t</i>			
<i>Main effects</i>			
Group	17.50	0.31	0.0002*
Method	0.17	0.004	0.68
Hemispheric side	0.02	0.0005	0.90
<i>Method x Group interaction</i>	11.58	0.23	0.001*

* Significant $p \leq 0.05$; ROI-i = individual ROI; ROI-t= ROI-template; $\eta^2 p$ = partial Eta Squared

	<i>F values(1,39)</i>	$\eta^2 p$	<i>p values</i>
<i>ROI-i vs. unmodulated Hip-peak</i>			
<i>Main effects</i>			
Group	21.46	0.35	0.00004*
Method	0.04	0.001	0.84
Hemispheric side	0.0001	0.000002	0.99
<i>Method x Group interaction</i>	2.86	0.07	0.09
<i>ROI-i vs. m_modulated Hip-peak</i>			
<i>Main effects</i>			
Group	22.53	0.37	0.00003*
Method	0.004	0.00009	0.95
Hemispheric side	0.02	0.0005	0.89
<i>Method x Group interaction</i>	0.245	0.006	0.62
<i>ROI-i vs. m0_modulated Hip-peak</i>			
<i>Main effects</i>			
Group	22.55	0.37	0.00003 *
Method	0.02	0.0005	0.89
Hemispheric side	0.02	0.0004	0.90
<i>Method x Group interaction</i>	1.38	0.03	0.25

*Significant $p \leq 0.05$; ROI-i = individual ROI ; ROI-t= ROI-template ; $\eta^2 p$ = partial Eta

Squared

Table S.2: Percent decrease and associated p values for each condition in aMCI compared to healthy controls.

	<i>Left Hippocampus</i>	<i>Right Hippocampus</i>
	% decrease	% decrease
	(<i>p value</i>)	(<i>p value</i>)
<i>ROI-i</i>	19.6 % * (<i>p</i> =0.0003)	17.8 % * (<i>p</i> =0.0002)
<i>ROI-t with unmodulated MRI</i>	5.1 % * (<i>p</i> =0.03)	3.5 % (<i>p</i> =0.12)
<i>ROI-t with m_modulated MRI</i>	10.9 % * (<i>p</i> =0.0006)	8.8 % * (<i>p</i> =0.002)
<i>ROI-t with m0_modulated MRI</i>	8.3 % * (<i>p</i> =0.002)	6.3 % * (<i>p</i> =0.006)
<i>Hip-peak with unmodulated MRI</i>	10.8 % * (<i>p</i> =0.003)	13.2 % * (<i>p</i> =0.002)
<i>Hip-peak with m_modulated MRI</i>	18.4 % * (<i>p</i> =0.0001)	16 % * (<i>p</i> =0.00004)
<i>Hip-peak with m0_modulated MRI</i>	15.9 % * (<i>p</i> =0.0002)	13.6 % * (<i>p</i> =0.0001)

* Significant between-group difference at $p \leq 0.05$

ROI-i = individual ROI; ROI-t = ROI-template.

Table S.3: Area Under the Curve values in each experimental condition in left and right hippocampus

	<i>Left Hippocampus</i>	<i>Right Hippocampus</i>
	(p value)	(p value)
<i>ROI-i</i>	0.81 * (p=0.0001)	0.82 * (p=0.0001)
<i>ROI-t with unmodulated MRI</i>	0.70 * (p=0.016)	0.63 (p=0.16)
<i>ROI-t with m_modulated MRI</i>	0.82 * (p=0.0001)	0.77 * (p=0.0002)
<i>ROI-t with m0_modulated MRI</i>	0.79 * (p=0.0001)	0.76 * (p=0.0006)
<i>Hip-peak with unmodulated MRI</i>	0.78 * (p=0.0001)	0.76 * (p=0.0004)
<i>Hip-peak with m_modulated MRI</i>	0.85 * (p=0.0001)	0.87 * (p=0.0001)
<i>Hip-peak with m0_modulated MRI</i>	0.85 * (p =0.0001)	0.87 * (p =0.0001)

* Significant between-group discrimination at $p \leq 0.05$

ROI-i = individual ROI; ROI-t = ROI-template