

On-line Table 1: ICV means and SDs in milliliters by the various estimation methods

Method	All (n = 30)	Males (n = 15)	Females (n = 15)
Manual	1598 (185)	1723 (125)	1473 (147)
FreeSurfer	1487 (185)	1620 (134)	1354 (124)
Optimized FreeSurfer	1598 (177)	1725 (128)	1471 (119)
RBM	1607 (178)	1733 (125)	1482 (128)
RBM multi	1596 (178)	1722 (121)	1469 (128)
ARBM	1598 (177)	1722 (124)	1475 (129)
ARBM multi	1568 (174)	1692 (119)	1444 (127)

On-line Table 2: Pearson correlation between brain volumes and ICV estimates for the whole HUNT dataset

Brain Volumes	FreeSurfer ^a	ARBM	ARBM Multi
Cerebral white matter	0.86	0.85	0.87
Cerebral cortex	0.79	0.79	0.81
Cerebellum white matter	0.64	0.63	0.64
Cerebellum cortex	0.66	0.66	0.66
Thalamus proper	0.72	0.70	0.71
Caudate	0.58	0.55	0.55
Putamen	0.55	0.53	0.54
Hippocampus	0.55	0.54	0.56
Pallidum	0.51	0.46	0.47
Amygdala	0.55	0.56	0.56
Nucleus accumbens	0.43	0.44	0.45

^a The FreeSurfer and FreeSurfer Opt correlations are identical because these 2 measurements are linearly related.

On-line Table 3: Accuracy of ICV estimates by the original RBM method that used the unified segmentation algorithm in SPM and the modified RBM method that used the "new segment" algorithm in SPM compared with manual delineation

	Original RBM (thr = 0.9) ^a	Original RBM (thr = 0.69) ^b	RBM (thr = 0.9) ^a	RBM (thr = 0.34) ^b	ARBM
Volume differences (mL)					
Mean (SD)	-41.77 (304.52)	-143.02 (315.86)	246.14 (46.12)	-9.17 (42.34)	-0.07 (41.64)
Absolute mean (SD)	219.34 (211.59)	198.89 (282.85)	246.14 (46.12)	34.38 (25.63)	34.57 (22.31)
Volume differences (%)					
DIFF (SD)	-1.9 (17.3)	-7.9 (17.1)	16.6 (2.2)	-0.6 (2.7)	-0.1 (2.6)
ADIFF (SD)	12.9 (11.3)	11.3 (15.0)	16.6 (2.2)	2.2 (1.6)	2.2 (1.4)
Dice overlap (mean) (SD)	0.90 (0.10)	0.90 (0.10)	0.95 (0.01)	0.96 (0.01)	0.96 (0.01)

Note:—DIFF indicates volume difference; ADIFF, absolute volume difference; thr, threshold.

^a With threshold = 0.9 as suggested in the original article by Keihaninejad et al.⁴

^b With a least-squares optimized threshold.