On-line Table 1: Cohort demographics[a]

	Rescan Distortion-Corrected MPRAGE (Day2day) (n = 8)	Rescan Non-Distortion-Corrected MPRAGE (Day2day) (n = 8)	Longitudinal Non-Distortion-Corrected MPRAGE (Clinical) (n = 20)	Cross-Sectional Distortion-Corrected MPRAGE (Day2day) (n = 50)	Cross-Sectional Non-Distortion-Corrected MPRAGE (Clinical) (n = 77)	Test Statistics
Sex (F/M)(%)	6:2 (75:25)	6:2 (75:25)	15:5 (75:25)	50:0 (100:0)	49:28 (64:36)	DD vs CND: $\chi^2 = 0$, $P = 1$ DDC vs CNDC: $\chi^2 = 21.3$, $P = <.001$[b]
Age (mean) (yr at baseline)	28.4 ± 2.97	28.4 ± 2.97	39.9 ± 15.3	24.9 ± 3.1	34.5 ± 12.0	DD vs CND: $\chi^2 = 3.5$, $P = .06$ DDC vs CNDC: $\chi^2 = 33.1$, $P = <.001$[b]
Follow-up time (mean) (day)	5.2 ± 6.3	5.0 ± 5.0	372.9 ± 207.3	NA	NA	NA
Baseline MUCCA-Jim (mean) (mm^2)	74.1 ± 3.6	72.7 ± 3.6	75.9 ± 7.1	76.6 ± 7.8	73.4 ± 7.0	$F = 14.7$, $P = <.001$[b]

Note:—DDC indicates Day2day distortion-corrected cross-sectional; CNDC, clinical non-distortion-corrected cross-sectional; NA, not applicable; CND, clinical non-distortion-corrected; DD, Day2day distortion-corrected.

[a] The 8 HP from the first 2 columns are the same participants, scanned using 2 MPRAGE sequences. Columns with "Clinical" in the header indicate HP from the observational cohort.

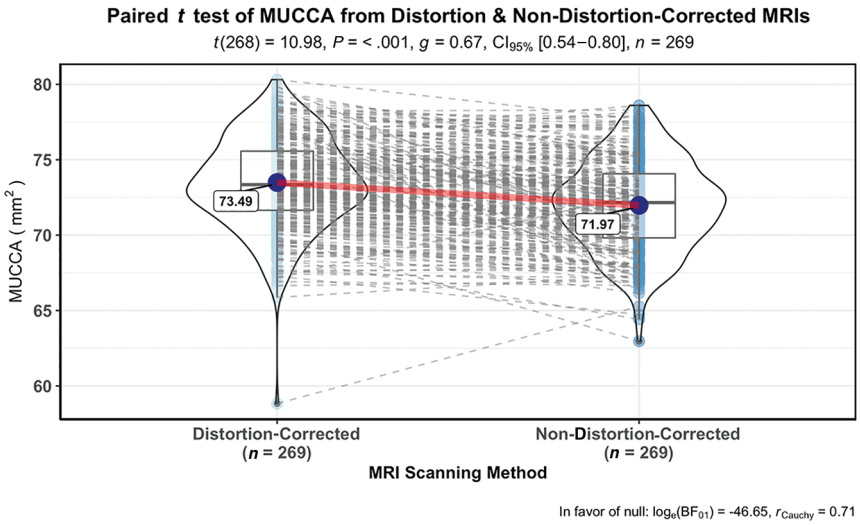
[b] Statistical significance.

On-line Table 2: CoVs for MUCCA-Jim and MUCCA-SCT for each Day2day participant

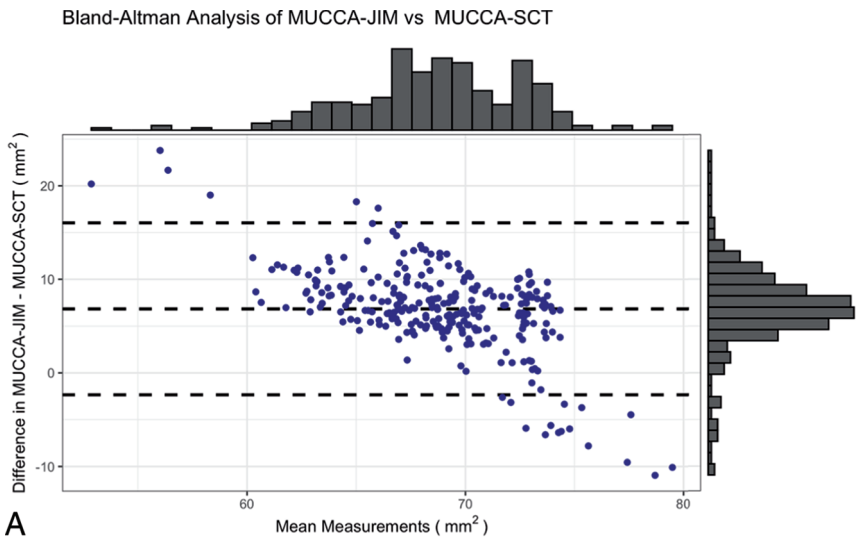
Participant	No. of Non-Distortion-Corrected MPRAGE Scans Analyzed	CoV for MUCCA-Jim	CoV for MUCCA-SCT
1	50	1.38	6.52
2	10	1.72	5.05
3	43	2.03	7.72
4	10	1.35	1.97
5	41	1.33	4.25
6	42	1.55	7.30
7	41	1.55	2.29
8	43	1.40	3.20

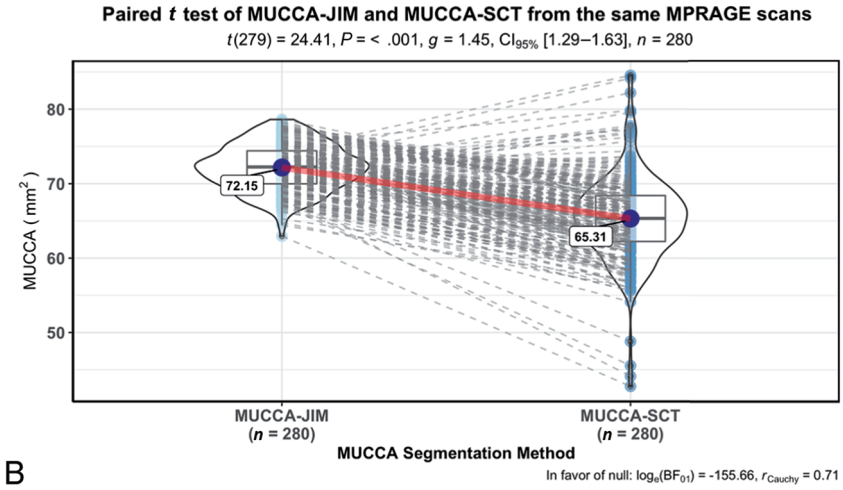
On-line Table 3: CoVs for MUCCA-Jim derived from non-distortion-corrected MPRAGE scans for each observational cohort participant

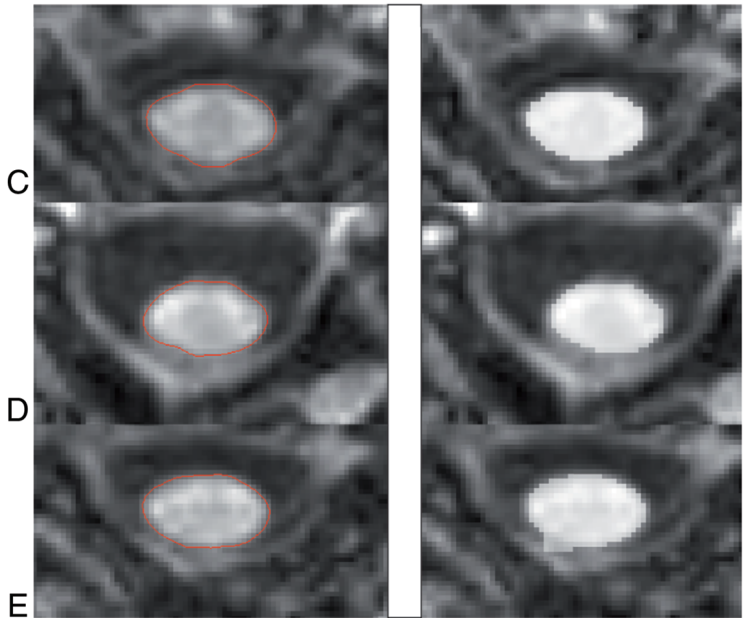
Participant	No. of Non-Distortion-Corrected MPRAGE Scans Analyzed	CoV
9	2	0.49
10	2	0.40
11	2	0.56
12	2	0.70
13	3	1.83
14	2	2.19
15	3	1.53
16	2	1.05
17	3	1.04
18	4	3.23
19	4	1.11
20	3	1.62
21	2	1.06
22	3	1.93
23	2	1.37
24	3	0.58
25	3	0.51
26	2	0.49
27	2	0.43
28	2	0.61



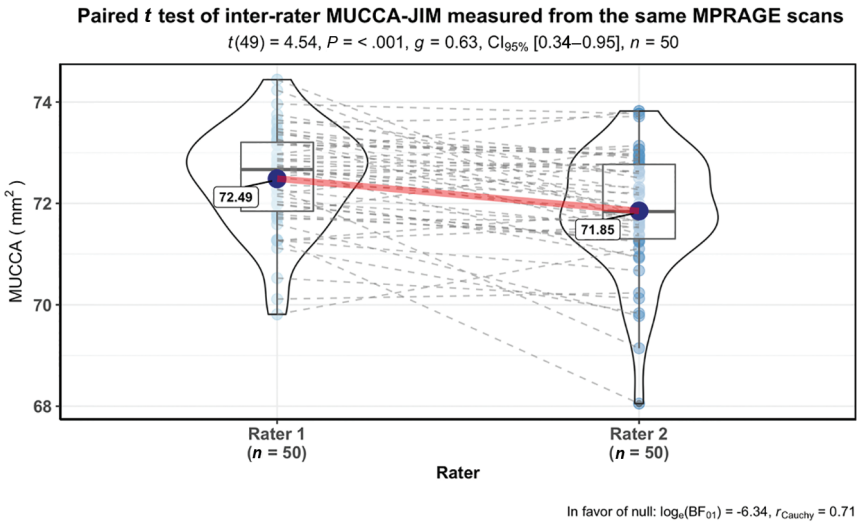
ON-LINE FIG 1. Paired *t* test showing that the mean rescan MUCCA-Jim is significantly different when derived from distortion- versus non-distortion-corrected MPRAGE scans.







ON-LINE FIG 2. *A*, Bland-Altman graph showing larger MUCCA-Jim measurements than MUCCA-SCT, with mean measures ranging mostly between 65 and 75 mm^2. *B*, Paired *t* test shows that the mean rescan MUCCA-Jim is significantly different from the rescan MUCCA-SCT. Representative segmentations by Jim (*red outline*) and PropSeg (*white overlay*) in which MUCCA differences were seen to be in the upper quartile 1 (*C*) (MUCCA-Jim–MUCCA-SCT $>$ 15 mm^2), inner quartiles 2 and 3 (*D*) (MUCCA-Jim–MUCCA-SCT were between 15 and $-$1.4 mm^2), and lower quartile 4 (*E*) (MUCCA-Jim–MUCCA-SCT $<$ $-$1.4 mm^2).



ON-LINE FIG 3. Paired *t* test showing that the mean rescan MUCCA-Jim is significantly different when measured by an experienced rater versus a non-experienced rater.