

Supplemental Table 1 – Temporal Stability

stop time (min)	SRTM BP <sub>ND</sub> (0-stop time) / (0-150)	SRTM2 BP <sub>ND</sub> (0-stop time) / (0-150)	DVR-1 (30-stop time) / (30-150)
50	0.78±0.07	0.77±0.28	0.91±0.14
60	0.82±0.06	0.79±0.17	0.91±0.11
70	0.85±0.05	0.82±0.11	0.91±0.08
75	0.86±0.05	0.83±0.09	0.91±0.07
80	0.88±0.04	0.85±0.07	0.91±0.07
85	0.89±0.04	0.86±0.07	0.92±0.07
90	0.90±0.04	0.87±0.06	0.92±0.06
95	0.91±0.03	0.88±0.05	0.92±0.06
100	0.92±0.03	0.89±0.05	0.95±0.05
125	0.94±0.02	0.92±0.04	0.97±0.04
130	0.95±0.02	0.95±0.03	0.98±0.03
135	0.97±0.01	0.97±0.02	0.99±0.02
140	0.98±0.01	0.98±0.01	0.99±0.02
145	0.99±0	0.99±0.01	1±0.01

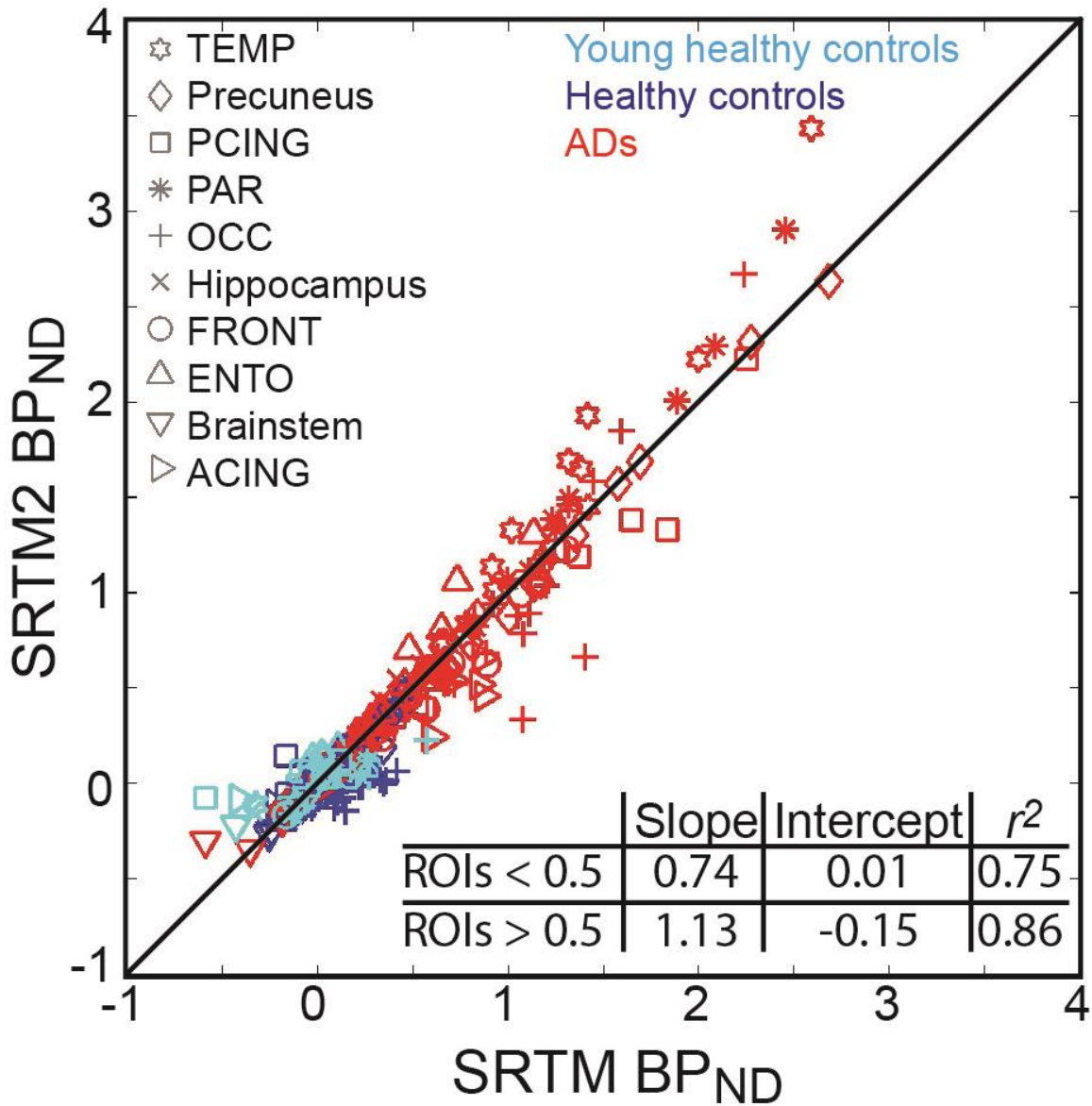
Legend – Temporal stability of SRTM, SRTM2 BP<sub>ND</sub> and DVR-1 was examined within 15 AD subjects for PCING, precuneus, OCC, PAR and TEMP. Ratios of shorter scan to full scan were taken, mean ± standard deviation reported.

Supplemental Table 2

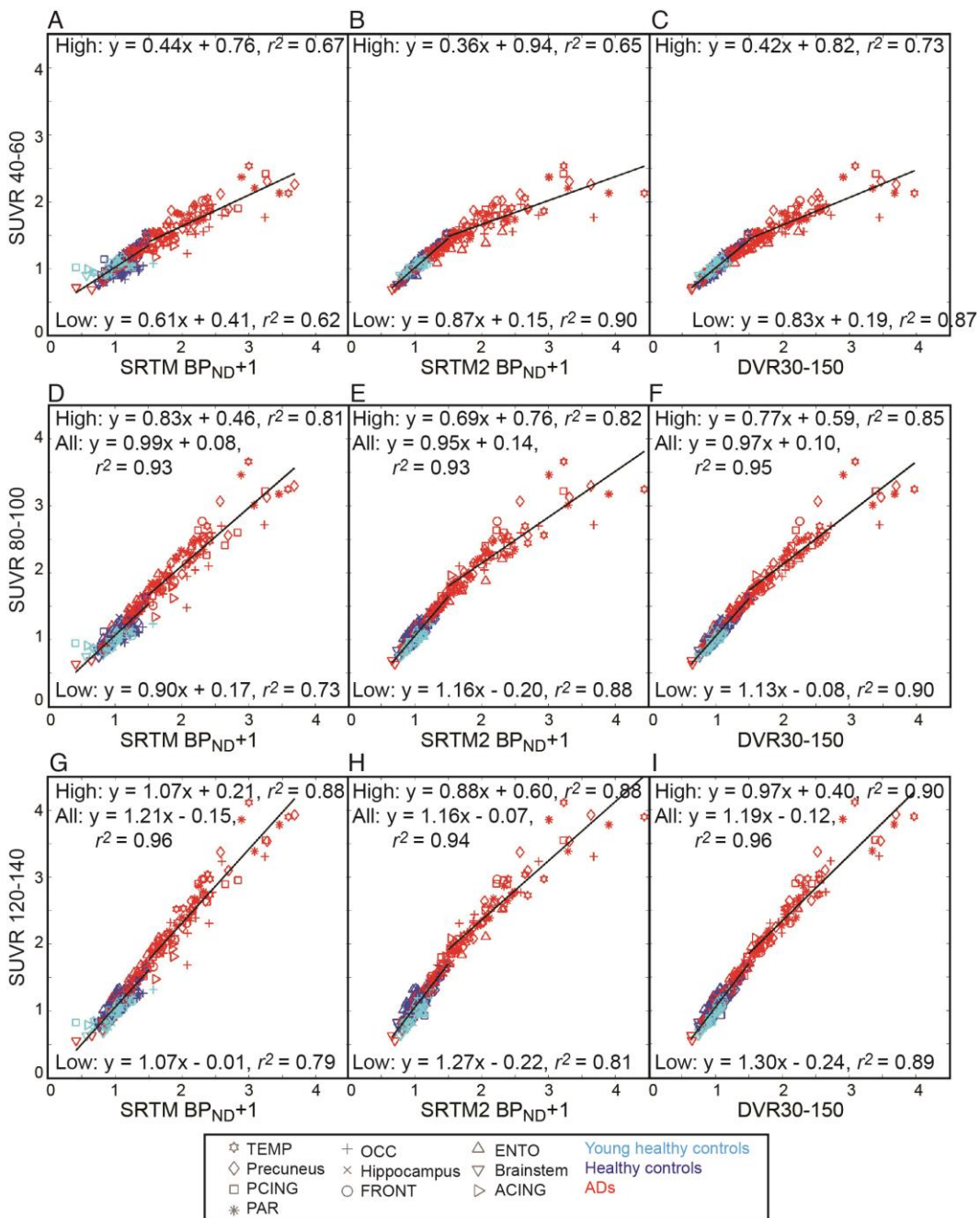
	Logan DVR	SRTM R <sub>1</sub>	SRTM2 R <sub>1</sub>
Anterior cingulate	AD: 1.23 ± 0.28 HC: 1.02 ± 0.09 yHC: 0.99 ± 0.05	AD: 0.91 ± 0.06 HC: 0.86 ± 0.09 yHC: 0.96 ± 0.05	AD: 0.90 ± 0.05 HC: 0.86 ± 0.09 yHC: 0.99 ± 0.05
Brainstem	AD: 0.84 ± 0.10 HC: 0.90 ± 0.07 yHC: 0.85 ± 0.11	AD: 0.73 ± 0.05 HC: 0.77 ± 0.05 yHC: 0.80 ± 0.04	AD: 0.74 ± 0.05 HC: 0.77 ± 0.05 yHC: 0.81 ± 0.04
Entorhinal cortex	AD: 1.45 ± 0.30 HC: 0.99 ± 0.10 yHC: 1.00 ± 0.07	AD: 0.64 ± 0.05 HC: 0.65 ± 0.05 yHC: 0.73 ± 0.02	AD: 0.66 ± 0.04 HC: 0.64 ± 0.05 yHC: 0.78 ± 0.06
Frontal cortex	AD: 1.46 ± 0.30 HC: 1.07 ± 0.10 yHC: 1.00 ± 0.09	AD: 0.92 ± 0.05 HC: 0.96 ± 0.08 yHC: 1.02 ± 0.03	AD: 0.90 ± 0.05 HC: 0.96 ± 0.08 yHC: 1.02 ± 0.03
Hippocampus	AD: 1.19 ± 0.18 HC: 1.12 ± 0.07 yHC: 0.92 ± 0.10	AD: 0.75 ± 0.06 HC: 0.81 ± 0.06 yHC: 0.85 ± 0.05	AD: 0.77 ± 0.06 HC: 0.82 ± 0.06 yHC: 0.88 ± 0.04
Occipital cortex	AD: 2.11 ± 0.51 HC: 1.04 ± 0.11 yHC: 1.07 ± 0.10	AD: 0.85 ± 0.15 HC: 0.91 ± 0.09 yHC: 0.96 ± 0.04	AD: 0.84 ± 0.13 HC: 0.90 ± 0.09 yHC: 0.95 ± 0.03
Parietal cortex	AD: 2.26 ± 0.61 HC: 1.08 ± 0.10 yHC: 1.02 ± 0.10	AD: 0.84 ± 0.08 HC: 0.97 ± 0.08 yHC: 1.02 ± 0.02	AD: 0.85 ± 0.08 HC: 0.98 ± 0.08 yHC: 1.03 ± 0.01
Posterior cingulate	AD: 1.85 ± 0.62 HC: 1.10 ± 0.09 yHC: 1.04 ± 0.07	AD: 0.99 ± 0.07 HC: 1.02 ± 0.09 yHC: 1.13 ± 0.03	AD: 0.97 ± 0.07 HC: 1.02 ± 0.10 yHC: 1.12 ± 0.03
Precuneus	AD: 2.22 ± 0.65	AD: 0.95 ± 0.08	AD: 0.95 ± 0.08

	HC: 1.13 ± 0.09 yHC: 1.03 ± 0.09	HC: 1.11 ± 0.08 yHC: 1.16 ± 0.04	HC: 1.11 ± 0.08 yHC: 1.15 ± 0.02
Temporal cortex	AD: 2.29 ± 0.63 HC: 1.12 ± 0.14 yHC: 1 ± 0.08	AD: 0.79 ± 0.09 HC: 0.88 ± 0.08 yHC: 0.94 ± 0.05	AD: 0.82 ± 0.09 HC: 0.90 ± 0.08 yHC: 0.95 ± 0.03
Caudate	AD: 0.87 ± 0.14 HC: 1.10 ± 0.14 yHC: 0.85 ± 0.13	AD: 0.69 ± 0.10 HC: 0.82 ± 0.11 yHC: 0.94 ± 0.02	AD: 0.74 ± 0.11 HC: 0.87 ± 0.12 yHC: 0.96 ± 0.02
Pallidum	AD: 1.28 ± 0.18 HC: 1.38 ± 0.13 yHC: 0.96 ± 0.12	AD: 0.87 ± 0.08 HC: 0.86 ± 0.09 yHC: 0.82 ± 0.10	AD: 0.94 ± 0.08 HC: 0.90 ± 0.10 yHC: 0.88 ± 0.07
Putamen	AD: 1.42 ± 0.17 HC: 1.41 ± 0.12 yHC: 0.96 ± 0.11	AD: 1.15 ± 0.08 HC: 1.12 ± 0.09 yHC: 1.11 ± 0.07	AD: 1.21 ± 0.08 HC: 1.18 ± 0.09 yHC: 1.15 ± 0.06
Thalamus	AD: 1.09 ± 0.14 HC: 1.19 ± 0.10 yHC: 0.98 ± 0.11	AD: 0.94 ± 0.08 HC: 1.00 ± 0.10 yHC: 1.05 ± 0.07	AD: 1.00 ± 0.09 HC: 1.03 ± 0.10 yHC: 1.08 ± 0.05

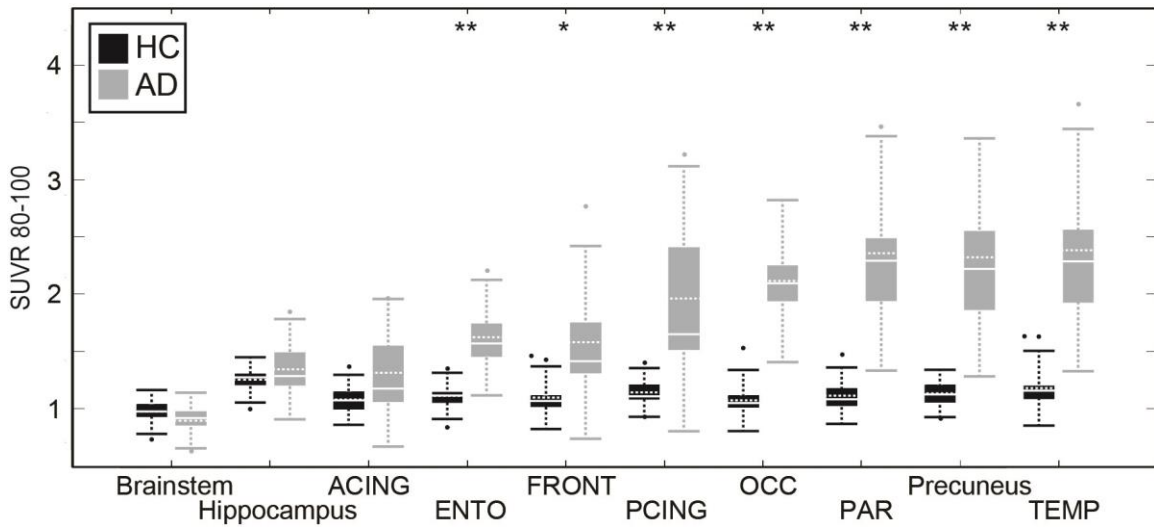
Legend - Mean ± standard deviation of DVR, SRTM R1 and SRTM2 R1 of ADs, HCs, and yHCs.



Supplemental Figure 1: SRTM  $BP_{ND}$  versus SRTM2  $BP_{ND}$ , in 43 subjects (yHCs: light blue, HCs: blue, ADs: red) for 10 ROIs (FRONT, PAR, OCC, TEMP, ENTO, brainstem, ACING, PCING, hippocampus, precuneus)



Supplemental Figure 2: Shows relationship between reference standards and SUVR40-60, SUVR80-100 and SUVR120-140 for 10 ROIs in yHC, HC and ADs. Results from linear regression fits between reference standards and SUVRs for lROIs and hROIs are shown in black.



Supplemental Figure 3: Welch's *t*-test between HCs and ADs in SUVR80-100. Boundaries of boxes represents 25<sup>th</sup>-75<sup>th</sup> percentile, solid horizontal white line is median, dashed horizontal white line is mean, dashed vertical line 5<sup>th</sup> to 95<sup>th</sup> percentiles. \*\* denotes  $p < 0.001$  and \* denotes  $p < 0.01$ , Bonferroni corrected.