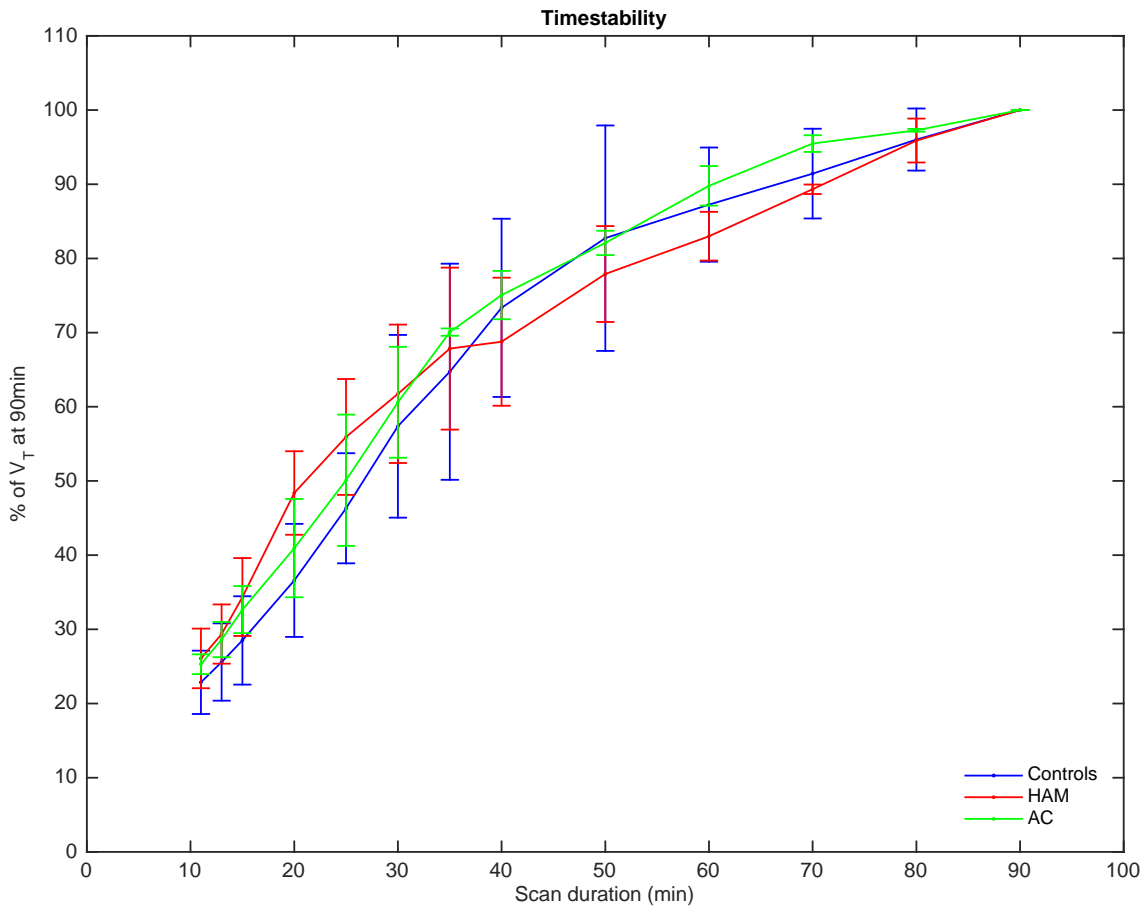


Supplemental Figure 1. A. Parent plasma input function over time in HAM patients, ACs and healthy controls; B. Parent fraction in plasma over time in different groups; C. Plasma over blood ratio over time in different groups.



Supplemental Figure 2. Time stability analysis of V_T with using PET data from increasing scan durations in HAM patients, ACs and healthy controls.

Supplemental Table 1. Neuropsychology data

Subject Code	Age (yrs)	Gender	NART	FAS*	GP Dominant hand (s)*	GP Non dominant hand (s)*	Trails A*	Trails B*	RAVL T x*	RAVL T recog A	RAVL T recog B	DS*	HADS A*	HADS D*	Summed Z scores
#1 HA Ms1	55	F	123	42	86	104	19	41	12.8			61	4	4	0.14
#2 HA Ms2	48	F	99	44	68	95	20	47	9			67	4	4	1.25
#3 HA Mmo	66	F	89	20	186	149	52	126	7.6	12	4	32	7	4	-14.4
#4 HA Mmi	59	F	107	34	60	72	34	49	12.8			56	6	2	2.62
#5 HA Mmo	54	M	88	38	91	112	40	115	8.2			27	16	11	-8.06
#6 Asy ml	57	F	106	34	85	104	37	44	10			29	5	13	-6.1
#7 Asy m2	57	M	81	39	73	83	41	118	7			25	3	4	-7.99

NART = National Adult Reading Test - Premorbid IQ; FAS = Benton test of verbal fluency

GP = Grooved pegboard - psychomotor speed; Trails A & B = perceptual motor speed,

RAVL T = Rey Auditory Verbal Learning Test - immediate memory span

DS = Digit Symbol - information processing/ cognitive flexibility; HADS A – Hospital Anxiety and Depression, anxiety subscale

HADS D – Hospital Anxiety and Depression, depression subscale. *Contribute to z scores

Supplemental Table 2. MR regional GM fractions: Z-scores of individual patient regional GM fractions compared to healthy volunteers.

Subject Code	HAMs1	HAMs2	HAMmo	HAMmi	Asym1	Asym2
Brain Stem	-2.14	-2.34	-2.45	-1.88	-1.49	-2.16
Medulla	-1.86	-2.07	-2.21	-1.90	-2.02	-1.92
Pons	-1.83	-2.08	-2.06	-1.31	-0.50	-1.86
Midbrain	-3.56	-3.27	-3.92	-3.61	-3.71	-3.40
Thalamus	-1.09	-1.39	-1.29	-0.45	-0.56	-0.68
Hippocampus	-1.49	-2.24	-1.18	-0.71	-0.57	-1.42
Amygdala	-5.77	-4.89	-5.62	-5.06	-3.27	-7.15
Cerebellum	-1.14	-0.42	-0.96	-1.40	-0.14	-0.79
Caudate	-1.52	-1.39	-0.77	-1.53	0.14	-1.34
Whole Grey	0.17	-0.66	-0.22	-0.39	-0.82	-1.03