Supplementary Data

Cognitive assessments

Verbal fluency examined the ability to spontaneously produce words orally within 60 seconds. For category fluency, words are produced according to semantic constraints. The SDMT involves a simple substitution task. Using a reference key, the participant had 90 seconds to pair specific numbers with given geometric figures. The Stroop Colour and Word Reading tests involve naming colours (e.g., red, green, blue) and reading the words for colours in black ink. Trail Making tasks are thought to reflect a wide variety of cognitive processes including visual attention, speed of processing, mental flexibility, and executive functions.

Additional Analyses

Additional analyses examined the relationship between manifest HD disease duration (time since onset age) and hypertension duration and found no significant relationship (r=0.06, 95% CI [-0.006-0.131], p=0.076).

ATC coding for antihypertensive medication

The following ATC codes were used for stratifying antihypertensives:

- Angiotensin converting enzyme inhibitors: C09AA
- Angiotensin receptor blockers: C09CA
- Calcium channel blockers: C08CA; C08CX; C08DA; C08DB; C08EA; C08EX
- Beta blocking agents: C07AA; C07AB
- Diuretics: C03AA; C03AB; C03BA; C03BB; C03BC; C03BD; C03BX; C03CA; C03CB; C03CC; C03CD; C03CX

Supplementary Table 1 Demographics after propensity matching based on antihypertensive medication use for age of onset analysis (manifest HD only included).

	Age of onset					
	Group count / mean			**p-value**		
	Normo (n=2426)	**Treated hyper (n=916)**	**Untreated hyper (n=297)**	**Untreated vs. Treated**	**Untreated vs. Normo**	**Treated vs.Normo**
Ethnicity (n, %)				0.57	0.32	0.84
Caucasian	2297 (94.7)	863 (94.2)	283 (95.3)			
American Black	19 (0.8)	10 (1.1)	2 (0.7)			
Hispanic / Latino	36 (1.5)	16 (1.7)	7 (2.4)			
American Indian	44 (1.8)	13 (1.4)	4 (1.3)			
Asian	6 (0.2)	3 (0.3)	0 (0)			
Mixed	15 (0.6)	7 (0.8)	1 (0.3)			
Other	9 (0.4)	4 (0.4)	0 (0)			
ISCED education level, n (%)				0.25	0.47	0.12
0	16 (0.7)	2 (0.2)	1 (0.3)			
1	145 (6.0)	55 (6.0)	23 (7.7)			
2	448 (18.6)	178 (19.6)	61 (20.5)			
3	755 (31.3)	339 (37.3)	100 (33.7)			
4	406 (16.8)	137 (15.1)	44 (14.8)			
5	585 (24.2)	180 (19.8)	65 (21.9)			
6	59 (2.4)	19 (2.1)	3 (1.0)			
Employment status, n (% employed)	359 (14.8)	137 (15.0)	43 (14.5)	0.26	0.58	0.11
Residence				0.21	0.10	0.75
rural	125 (5.2)	49 (5.3)	24 (8.1)			
village	461 (19.0)	148 (16.2)	40 (13.5)			
town	919 (37.9)	349 (38.1)	127 (42.8)			
city	917 (37.8)	370 (40.4)	106 (35.7)			
Marital Status				0.18	0.59	0.10
single	239 (9.9)	72 (7.9)	32 (10.8)			
married	111 (4.6)	35 (3.8)	12 (4.0)			

partnership	1575 (64.9)	600 (65.5)	184 (62.0)		
divorced	318 (13.1)	121 (13.2)	40 (13.5)		
widowed	143 (5.9)	73 (8.0)	23 (7.7)		
legally separated	35 (1.4)	14 (1.5)	6 (2.0)		

Comorbidities/concomitant

Comorbidity, n (%)	2209 (91.1)	872 (95.2)	282 (95.0)	*0.0002*	*0.029*	*0.0002*
Nutritional supplements, n (%)	1126 (46.4)	425 (46.4)	150 (50.5)	0.33	0.17	0.87
Nonpharmacological therapies, n (%)	1006 (41.5)	394 (43.0)	129 (43.4)	0.82	0.45	0.65
Current alcohol use, n (% yes)	947 (39.1)	338 (36.9)	98 (33.0)	0.17	0.07	0.50
Alcohol units/week (SD)	7.7 (9.9)	7.6 (10.1)	7.6 (12.3)	0.998	0.94	0.89
Current tobacco use, n (% yes)	451 (18.6)	182 (19.9)	70 (23.6)	0.18	0.06	0.56
Tobacco pack years (SD)	28.7 (19.8)	26.1 (20.5)	27.2 (22.9)	0.93	0.89	0.42
Current drug abuse, n (% yes)	35 (1.4)	12 (1.3)	6 (2.0)	0.68	0.61	0.54

	Disease severity (premanifest and manifest HD)					
	Normo (n=3032)	Treated hyper (n=1144)	Untreated hyper (n=372)	Untreated vs. Treated	Untreated vs. Normo	Treated vs.Normo
Ethnicity (n, %)				0.35	0.99	0.15
Caucasian	2885 (95.2)	1076 (94.1)	354(95.2)			
American Black	14 (0.5)	12 (1.0)	3 (0.8)			
Hispanic / Latino	50 (1.6)	19 (1.7)	7 (1.9)			
American Indian	48 (1.6)	19 (1.7)	5 (1.3)			
Asian	5 (0.2)	4 (0.3)	0			
Mixed	21 (0.7)	7 (0.6)	2 (0.5)			
Other	9 (0.3)	7 (0.6)	1 (0.3)			
ISCED education level, n (%)				0.25	0.47	0.12
0	16 (0.5)	2 (0.2)	1 (0.3)			
1	155 (5.1)	56 (4.9)	27 (7.3)			
2	553 (18.2)	208 (18.2)	72 (19.4)			
3	885 (29.2)	407 (35.6)	120 (32.3)			
4	557 (18.4)	183 (16.0)	61 (16.4)			
5	773 (25.5	259 (22.6)	86 (23.1)			
6	76 (2.5)		4 (1.1)			
Employment status, n (% employed)	774 (25.5)	277 (24.2)	91 (24.5)	0.12	0.57	*0.04*
Residence				*0.03*	*0.01*	0.82
rural	170 (5.6)	62 (5.4)	33 (8.9)			
village	566 (18.7)	187 (16.3)	51 (13.7)			
town	1158 (38.2)	429 (37.5)	155 (41.7)			
city	1133 (37.4)	466 (40.7)	132 (35.5)			
Marital Status				0.2	0.43	0.15
single	310 (10.2)	100 (8.7)	43 (11.6)			
married	172 (5.7)	58 (5.1)	20 (5.4)			
partnership	1973 (65.1)	739 (64.6)	225 (60.5)			

divorced	377 (12.4)	144 (12.6)	51 (13.7)			
widowed	155 (5.1)	84 (7.3)	24 (6.5)			
legally separated	38 (1.3)	18 (1.6)	7 (1.9)			

Comorbidities/concomitant

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Comorbidity, n (%)	2751 (90.7)	1085 (94.8)	352 (94.6)	*1.50E-05*	*0.01*	*1.90E-05*
Nutritional supplements, n (%)	1369 (45.2)	538 (47.0)	177 (47.6)	0.43	0.38	0.28
Nonpharmacological therapies, n (%)	1170 (38.6)	460 (40.2)	151 (40.6)	0.53	0.45	0.34
Current alcohol use, n (% yes)	1304 (43.1)	465 (40.7)	143 (38.5)	0.13	0.1	0.17
Alcohol units/week (SD)	7.9 (10.1)	(7.6 10.2)	8.0 (11.7)	0.93	1	0.86
Current tobacco use, n (% yes)	594 (19.6)	223 (19.5)	89 (23.9)	0.11	*0.04*	0.85
Tobacco pack years (SD)	27.3 (19.9)	25.7 (19.8)	25.9 (21.7)	1	0.79	0.58
Current drug abuse, n (% yes)	59 (1.9)	17 (1.5)	11 (3.0)	0.11	0.17	0.19

	Disease progression (premanifest and manifest HD)					
	Normo (n=4342)	Treated hyper (n=1149)	Untreated hyper (n=372)	Untreated vs. Treated	Untreated vs. Normo	Treated vs.Normo
Ethnicity (n, %)				0.34	0.21	0.37
Caucasian	4076 (93.9)	1081 (94.1)	354 (95.2)			
American Black	35 (0.8)	12 (1.0)	3 (0.8)			
Hispanic / Latino	77 (1.8)	19 (1.7)	7 (1.9)			
American Indian	79 (1.8)	19 (1.7)	5 (1.3)			
Asian	12 (0.3)	4 (0.3)	0			
Mixed	34 (0.8)	7 (0.6)	2 (0.5)			
Other	29 (0.7)	7 (0.6)	1 (0.3)			
ISCED education level, n (%)				0.64	0.41	0.71
0	15 (0.3)	2 (0.2)	1 (0.3)			
1	182 (4.2)	56 (4.9)	27 (7.3)			
2	739 (17.0)	210 (18.3)	72 (19.4)			
3	1305 (30.1)	408 (35.5)	119 (32.0)			
4	785 (18.1)	183 (15.9)	61 (16.4)			
5	1182 (27.2)	261 (22.7)	87 (23.4)			
6	111 (2.6)	22 (1.9)	4 (1.1)			
Employment status, n (% employed)†	1384 (31.9)	278 (24.2)	91 (24.5)	**8.80E+15**	**0.0003**	**7.95E+14**
Full-time	*987 (22.7)*	*178 (15.5)*	*63 (16.9)*			
Part-time	*307 (7.1)*	*73 (6.4)*	*18 (4.8)*			
Self-employed	*90 (2.1)*	*27 (2.3)*	*10 (2.7)*			
Residence				**0.004**	**0.001**	0.8
rural	252 (5.8)	62 (5.4)	33 (8.9)			
village	778 (17.9)	186 (16.2)	51 (13.7)			
town	1633 (37.6)	430 (37.4)	155 (41.7)			
city	1672 (38.5)	471 (41.0)	132 (35.5)			
Marital Status				**6.60E-10**	0.33	**8.43E-11**

single	576 (13.3)	100 (8.7)	43 (11.6)			
married	276 (6.4)	58 (5.0)	19 (5.1)			
partnership	2717 (62.6)	742 (64.6)	226 (60.8)			
divorced	507 (11.7)	145 (12.6)	51 (13.7)			
widowed	181 (4.2)	85 (7.4)	24 (6.5)			
legally separated	78 (1.8)	18 (1.6)	7 (1.9)			
Comorbidities/concomitant						
Comorbidity, n (%)	3956 (91.1)	1090 (94.9)	352 (94.6)	*2.20E-16*	*2.15E-06*	*2.77E-13*
Nutritional supplements, n (%)	2037 (46.9)	541 (47.1)	178 (47.8)	*0.001*	*0.0002*	0.69
Nonpharmacological therapies, n (%)	1801 (41.5)	465 (40.5)	151 (40.6)	0.37	0.71	0.19
Current alcohol use, n (% yes)	1944 (44.8)	463 (40.3)	144 (38.8)	*3.10E-07*	*6.54E-06*	*0.000331*
Alcohol units/week (SD)	7.97 (10.2)	9.05 (10.2)	8.17 (11.7)	0.25	0.92	*0.0008*
Current tobacco use, n (% yes)	932 (21.5)	224 (19.5)	89 (23.9)	0.24	0.45	0.11
Tobacco pack years (SD)	24.7 (19.6)	25.7 (19.8)	25.9 (21.7)	0.26	0.03	0.44
Current drug abuse, n (% yes)	99 (2.3)	17 (1.5)	11 (3.0)	*1.70E-05*	0.91	*2.66E-06*
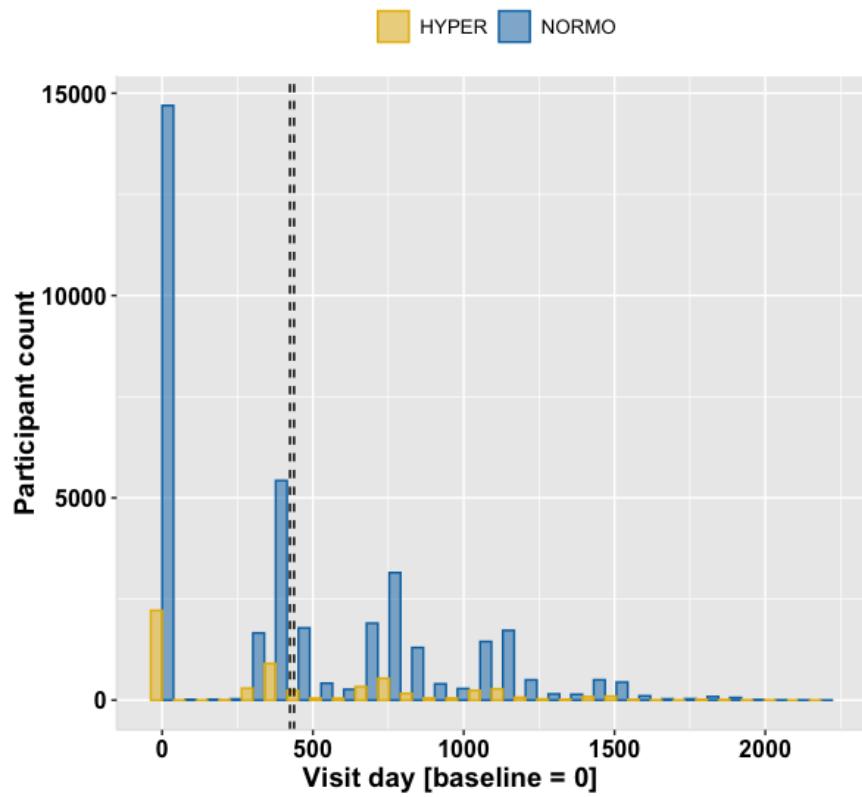
Supplementary Figure 1 Histogram showing the longitudinal follow up period and the participant numbers, stratified for hypertension status and prior to propensity matching.
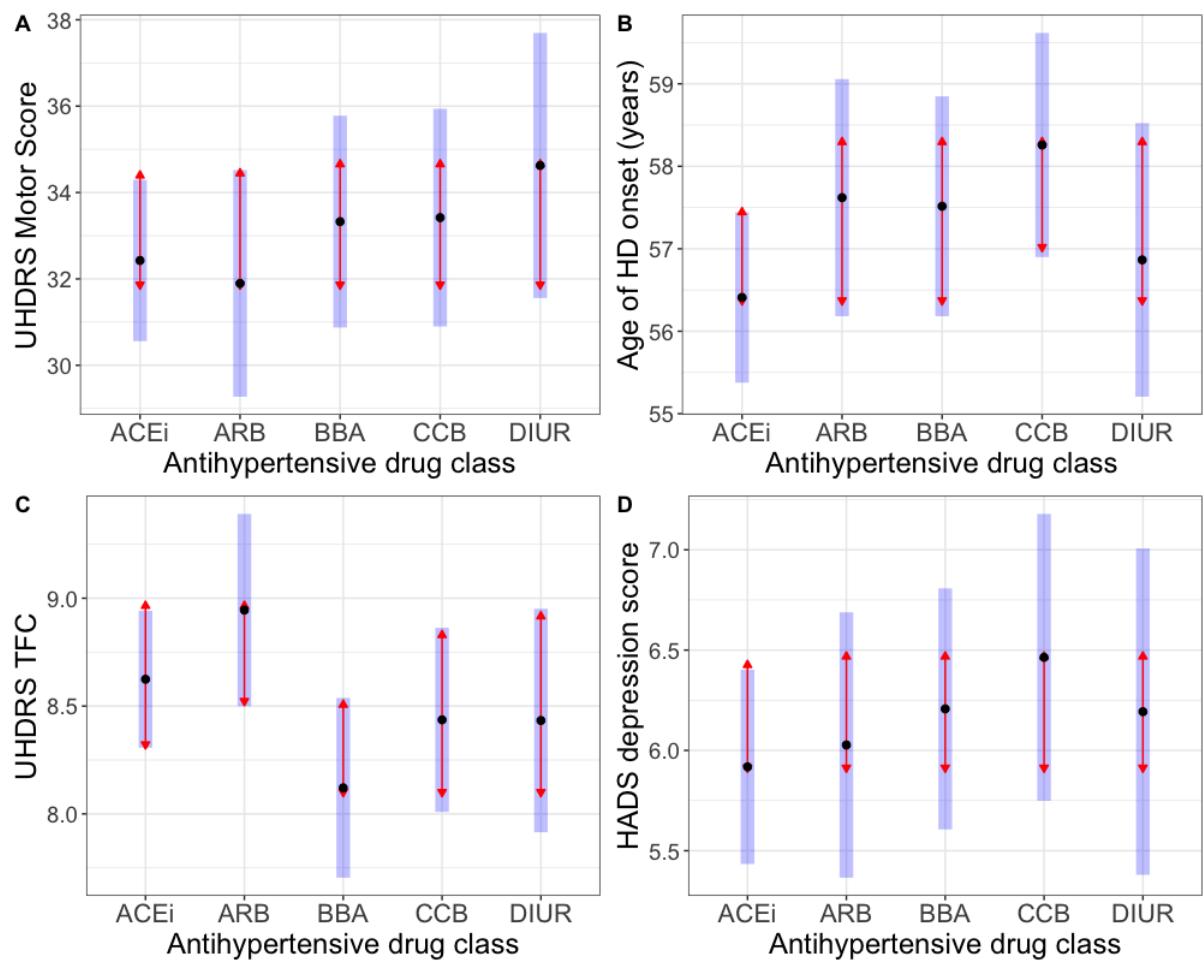
Supplementary Figure 2 Estimated marginal means (EMMs) from the linear model analyses, adjusted for sex, examining the effect of antihypertensive drug class on HD age of onset and clinical measures in hypertensive HD participants. Black dot represents the mean, blue bars are 95% CIs for the EMMs, red arrows represent the Tukey-based statistical comparison (overlapping arrows = not significant).