Supplementary table 1

Comorbidities and Gender

Comorbidities	pcb-Cohort N=568	Gender		p-value*
		Male N= 163	Female N= 405	
HYP	351 (61.8%)	101[a] (62.0%)	250[a] (61.7%)	0.958
DYS	333 (58.6%)	92[a] (56.4%)	241[a] (59.5%)	0.502
OA	305 (53.7%)	53[a] (32.5%)	252[b] (62.2%)	0.000
CVD	302 (53.2%)	95[a] (58.3%)	207[a] (51.1%)	0.121
DEP	182 (32.0%)	22[a] (13.5%)	160[b] (39.5%)	0.000
GID	151 (26.6%)	31[a] (19%)	120[b] (29.6%)	0.010
GUD	122 (21.5%)	49[a] (30.1%)	73[b] (18.0%)	0.002
DM	115 (20.2%)	36[a] (22.1%)	79[a] (19.5%)	0.489
RESP	93 (16.4%)	20[a] (12.3%)	73[a] (18.0%)	0.094
HEMATO	60 (10.6%)	9[a] (5.5%)	51[b] (12.6%)	0.013
ONCO	32 (5.6%)	6[a] (3.7%)	26[a] (6.4%)	0.200
NEURO	22 (3.9%)	6[a] (3.7%)	16[a] (4.0%)	0.880
ALCOHOL	14 (2.5%)	12[a] (7.4%)	2[b] (0.5%)	0.000

Abbreviations: as previously indicated. * Statistical test: χ^2-Chi square test. [a,b,c] The same subscript letter denotes a subset of categories whose column proportions do not differ significantly from each other at the 0.05 level. Different subscript letters denote column proportions which differ significantly from each other at the 0.05 level.
NOTE: % is expressed as a function of the total for each of the columns (N=568, N=163 and N=405 respectively).

Supplementary table 2:
Likelihood Ratio Tests

Effect	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	705.673	849.510	637.673[a]	0.000	0	---
ApoE ε4 carriers	705.219	840.595	641.219	3.546	2	0.170
ApoE ε3 carriers	704.767	840.142	640.767	3.094	2	0.213
ApoE ε2 carriers	707.966	843.342	643.966	6.293	2	0.043
Gender	706.147	841.523	642.147	4.474	2	0.107
Age Group	716.139	843.053	656.139	18.465	4	0.001
Literacy	731.027	857.941	671.027	33.353	4	0.000
ADL	716.895	852.270	652.895	15.222	2	0.000
IADL	717.093	852.469	653.093	15.420	2	0.000
HYP	702.789	838.165	638.789	1.116	2	0.572
OA	703.634	839.009	639.634	1.960	2	0.375
DEP	704.364	839.739	640.364	2.691	2	0.260
GID	716.569	851.944	652.569	14.895	2	0.001
DM	703.730	839.105	639.730	2.056	2	0.358
NEURO	712.906	848.281	648.906	11.233	2	0.004

The chi-square test statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0. [a] This reduced model is equivalent to the final model given that omitting the effect does not increase the degrees of freedom.
The ApoE allele carriers, Age group, Literacy, Katz Index, IADL, Neurodegenerative disorders and Gastrointestinal Disease contribute significantly to the cognitive performance of individuals (based on the CDR test).