Item S1. Cognitive Function Summary Score Components by ACR and eGFR Groups

Table *a*. Cognitive Function Summary Score Components by ACR Group

Domain/Test	Maximum Score	Unadjusted Total Scores (N=2707)	Adjusted Means (SE)				P-value
			<10 (N=1386)	10-29 (N=776)	30-299 (N=466)	300+ (N=79)	
Screening							
MoCA	30	23.0 (0.08)	20.5 (0.32)	20.2 (0.33)	20.3 (0.35)	19.3 (0.48)	0.02
Executive Functioning							
Trail Making Part B	300	119.8 (1.3)	154.4 (5.97)	155.1 (6.05)	160.1 (6.46)	177.2 (8.88)	0.01
Category Fluency	No limit	17.8 (0.10)	15.5 (0.45)	15.5 (0.45)	15.5 (0.48)	14.5 (0.67)	0.4
Digit Symbol Substitution	135	51.0 (0.29)	43.0 (1.21)	42.3 (1.22)	41.3 (1.31)	39.2 (1.80)	0.01
Digits Backward	16	7.32 (0.04)	6.39 (0.20)	6.28 (0.21)	6.32 (0.22)	5.88 (0.30)	0.2
Memory							
Logical Memory Immediate	28	19.3 (0.09)	16.6 (0.41)	16.7 (0.42)	16.3 (0.45)	16.2 (0.61)	0.4
Logical Memory Delayed	14	8.20 (0.06)	6.83 (0.29)	6.78 (0.29)	6.92 (0.31)	6.61 (0.43)	0.8
ROCF, Immediate Recall	24	14.3 (0.09)	12.6 (0.41)	12.2 (0.42)	12.2 (0.44)	11.6 (0.62)	0.03
HVLT-R, Trials 1-3	36	21.6 (0.10)	19.1 (0.44)	19.1 (0.45)	18.5 (0.48)	18.4 (0.66)	0.08
HVLT-R Delayed Recall	12	5.49 (0.07)	4.07 (0.35)	4.20 (0.35)	3.89 (0.38)	3.63 (0.52)	0.4
Attention/Concentration							
Trail Making Part A	300	43.5 (0.46)	51.6 (2.08)	52.6 (2.11)	50.9 (2.25)	53.3 (3.12)	0.5
Digits Forward	16	9.53 (0.05)	8.39 (0.23)	8.28 (0.23)	8.37 (0.24)	8.08 (0.34)	0.5
MoCA Attention Subset	6	5.16 (0.02)	4.58 (0.10)	4.52 (0.10)	4.50 (0.11)	4.32 (0.15)	0.1
Language							
Boston Naming	15	11.7 (0.06)	9.57 (0.25)	9.59 (0.26)	9.66 (0.27)	9.84 (0.38)	0.8
MoCA Naming Subset	3	2.73 (0.01)	2.65 (0.05)	2.65 (0.05)	2.66 (0.05)	2.58 (0.07)	0.6
MoCA Sentence Repeat	2	1.40 (0.01)	1.08 (0.06)	1.09 (0.07)	1.07 (0.07)	1.02 (0.10)	0.8
Ungrouped							
HVLT-R Discrimination Index	12	10.7 (0.03)	10.3 (0.15)	10.3 (0.16)	10.3 (0.17)	10.3 (0.23)	0.9
ROCF, Copying	24	18.9 (0.07)	17.9 (0.31)	17.7 (0.32)	17.5 (0.34)	17.8 (0.47)	0.2

Adjusted for age, network, education, race, diabetes, cardiovascular disease, use of ACE inhibitors or angiotensin receptor blockers, sex, systolic blood pressure, diastolic blood pressure, total cholesterol, HDL cholesterol, LDL cholesterol and eGFR. For all tests, higher scores represent worse performance except Trail Making Test Part A and Part B, which are timed tests and results are presented as seconds required to complete. Tests are grouped under the domain they most closely align with. P-values are for trend.

Item S1. Cognitive Function Summary Score Components by ACR and eGFR Groups

Table *b.* Cognitive Function Summary Score Components by eGFR Group

Variable	Maximum Score	Unadjusted Total Scores (N=2707)	Adjusted Mean (SE)					P-value
			90+ (N=530)	75-89 (N=700)	60-74 (N=678)	45-59 (N=493)	<45 (N=306)	
Screening								
MoCA	30	23.0 (0.08)	20.4 (0.34)	20.2 (0.33)	20.5 (0.33)	20.2 (0.34)	20.1 (0.36)	0.2
Executive Functioning								
Trail Making Part B	300	119.8 (1.3)	158.7 (6.38)	154.6 (6.17)	153.0 (6.16)	159.4 (6.29)	162.2 (6.71)	0.1
Category Fluency	No limit	17.8 (0.10)	15.6 (0.48)	15.4 (0.46)	15.7 (0.46)	15.1 (0.47)	15.3 (0.50)	0.3
Digit Symbol Substitution	135	51.0 (0.29)	41.7 (1.29)	43.0 (1.25)	43.8 (1.25)	41.4 (1.27)	40.9 (1.36)	0.001
Digits Backward	16	7.32 (0.04)	6.22 (0.22)	6.38 (0.21)	6.46 (0.21)	6.13 (0.21)	6.32 (0.23)	0.07
Memory								
Logical Memory Immediate	28	19.3 (0.09)	16.8 (0.44)	16.8 (0.43)	16.7 (0.43)	16.3 (0.44)	16.2 (0.46)	0.1
Logical Memory Delayed	14	8.20 (0.06)	7.04 (0.31)	6.84 (0.30)	6.89 (0.30)	6.69 (0.30)	6.35 (0.32)	0.05
ROCF, Immediate Recall	24	14.3 (0.09)	12.5 (0.44)	12.3 (0.43)	12.3 (0.42)	12.4 (0.43)	12.4 (0.46)	0.9
HVLT-R, Trials 1-3	36	21.6 (0.10)	19.4 (0.47)	19.2 (0.46)	19.2 (0.45)	18.6 (0.46)	18.2 (0.50)	0.004
HVLT-R Delayed Recall	12	5.49 (0.07)	4.19 (0.37)	3.98 (0.36)	4.19 (0.36)	3.95 (0.37)	3.98 (0.39)	0.7
Attention/Concentration								
Trail Making Part A	300	43.5 (0.46)	52.0 (2.22)	50.8 (2.15)	52.1 (2.15)	52.5 (2.20)	53.2 (2.34)	0.6
Digits Forward	16	9.53 (0.05)	8.25 (0.24)	8.39 (0.23)	8.35 (0.23)	8.28 (0.24)	8.36 (0.25)	0.9
MoCA Attention Subset	6	5.16 (0.02)	4.52 (0.11)	4.57 (0.10)	4.54 (0.10)	4.54 (0.11)	4.46 (0.11)	0.7
Memory								
Boston Naming	15	11.7 (0.06)	9.58 (0.27)	9.70 (0.26)	9.71 (0.26)	9.57 (0.27)	9.32 (0.28)	0.3
MoCA Naming Subset	3	2.73 (0.01)	2.64 (0.05)	2.63 (0.05)	2.67 (0.05)	2.64 (0.05)	2.62 (0.05)	0.6
MoCA Sentence Repeat	2	1.40 (0.01)	1.08 (0.07)	1.04 (0.07)	1.07 (0.07)	1.13 (0.07)	1.12 (0.07)	0.2
Ungrouped								
HVLT-R Discrimination Index	12	10.7 (0.03)	10.5 (0.16)	10.3 (0.16)	10.3 (0.16)	10.2 (0.16)	10.2 (0.17)	0.1
ROCF, Copying	24	18.9 (0.07)	17.8 (0.33)	17.7 (0.32)	17.8 (0.32)	17.8 (0.33)	17.6 (0.35)	0.9

Adjusted for age, network, education, race, diabetes history, cardiovascular disease, use of ACE inhibitors or angiotensin receptor blockers, sex, systolic blood pressure, diastolic blood pressure, total cholesterol, HDL cholesterol, LDL cholesterol and log transformed urine ACR. For all tests, higher scores represent worse performance except Trail Making Test Part A and Part B, which are timed tests and scored in seconds to complete. Tests are grouped under the domain they most closely align with. P-values are for trend.