

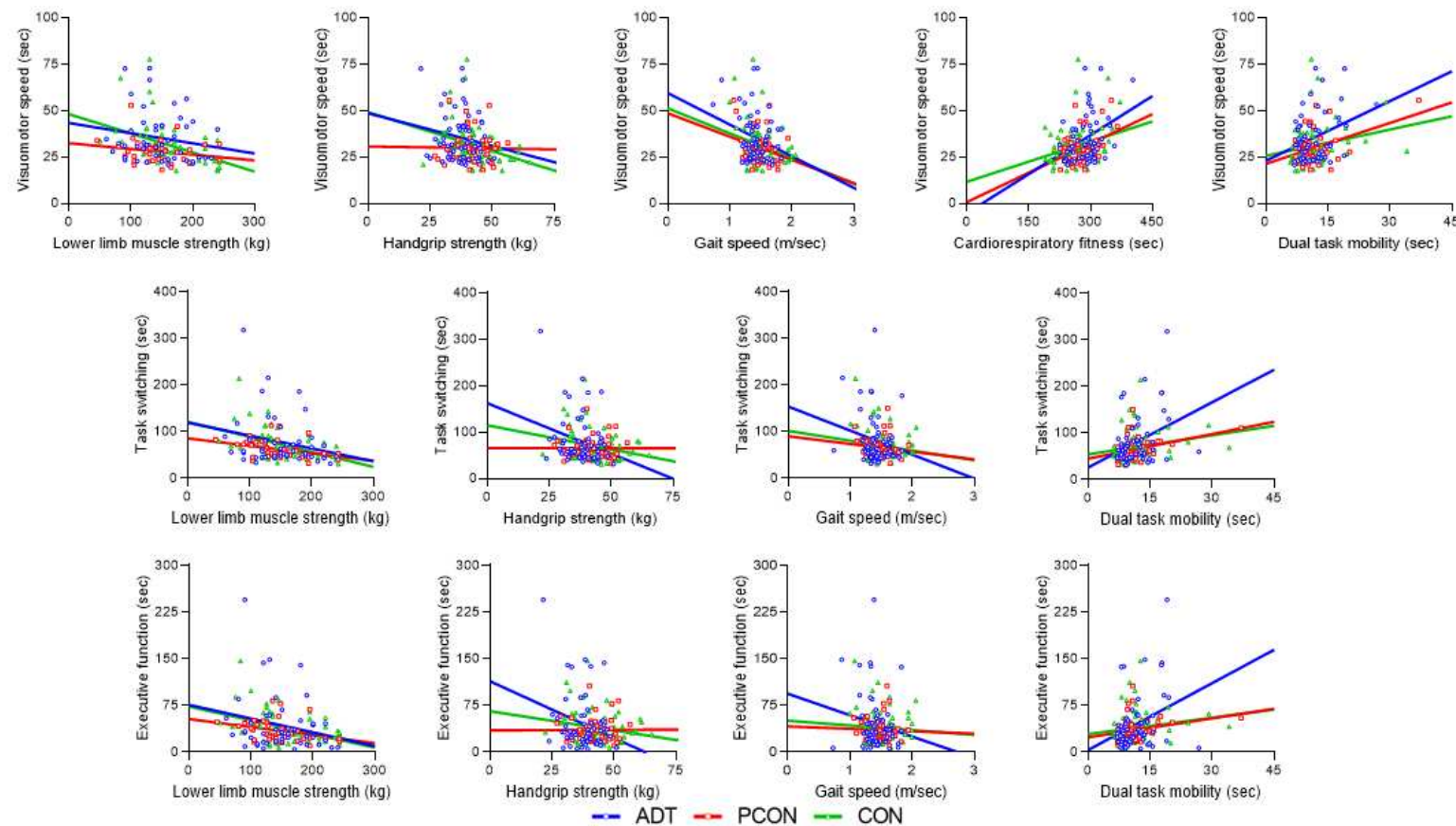
SUPPLEMENT

**Supplementary Table 1.** The associations between strength, function and cognition in men with prostate cancer treated with androgen deprivation therapy (ADT; n=70), prostate cancer controls (PCON; n=52) and healthy controls (HCON; n=70) pooled.

Variable	Leg press 3RM	Grip strength	Gait speed	400m walk	TUGC
Rey Auditory Verbal Learning Test					
Immediate recall	0.195*	0.111	0.159*	-0.300***	-0.272***
Verbal learning	0.184*	0.143	0.184*	-0.368***	-0.296***
Delayed recall	0.062	0.106	0.139	-0.298***	-0.189*
Digit span					
Verbal recall	0.146	0.106	0.138	-0.248****	-0.263***
Verbal working memory	0.131	0.102	0.191*	-0.153*	-0.240****
Trail making test					
Visuomotor speed	-0.274***	-0.246****	-0.294***	0.354***	0.284***
Task switching	-0.307***	-0.233****	-0.181*	0.331***	0.270***
Executive function	-0.277***	-0.194****	-0.116	0.276***	0.225****
CogState					
Simple reaction time	0.244****	0.222****	0.195****	-0.202****	-0.252***
Choice reaction time	0.276***	0.317***	0.160*	-0.225****	-0.255****
Working memory speed	0.177*	0.183*	0.155*	-0.187*	-0.234****
Working memory accuracy	0.206*	0.106	0.040	-0.090	-0.150*
Executive function errors	0.233****	0.242****	0.152*	-0.284***	-0.229****
CogState composite scores					
Psychomotor-attention	0.283***	0.307***	0.193**	-0.233**	-0.276***

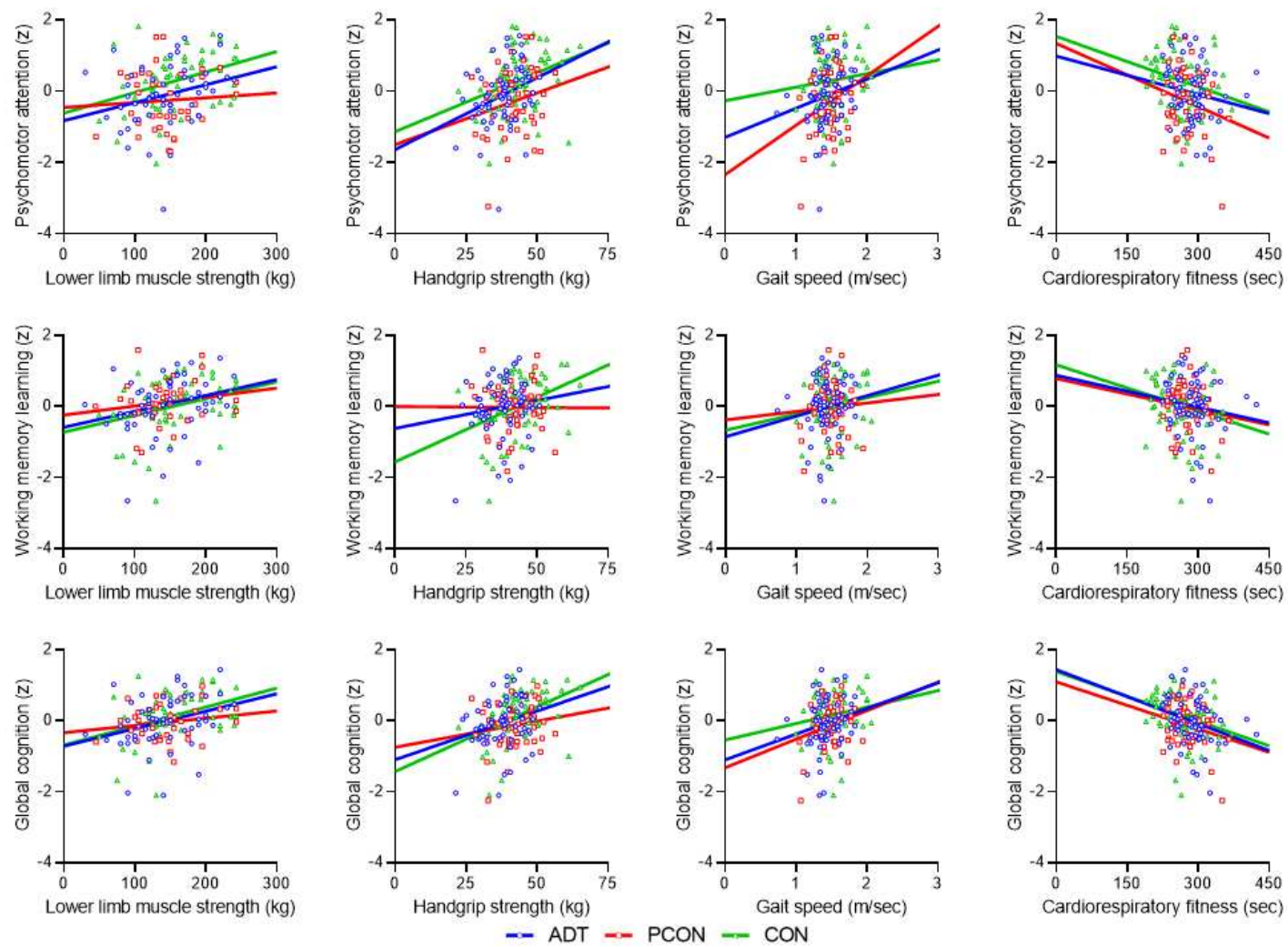
Working memory-learning	0.253**	0.199**	0.123	-0.176*	-0.247***
Global cognition	0.338***	0.323***	0.205**	-0.292***	-0.330***

Data are Pearson’s correlation coefficient. P<0.05, \*\*P<0.01, \*\*\*P<0.001. Visuomotor speed (Trail making Test part A), Task Switching (Trail making Test part B), Executive Function (Trail making Test part B-A); Immediate recall (Rey Auditory Verbal Learning Test [RAVLT] trial 1); Verbal learning (RAVLT trial 1-5 inclusive); Delayed recall (RAVLT trial 7); Verbal recall (Digit Span forwards); Verbal working memory (Digit Span backward). CogState measures: Simple reaction time (DET speed); Choice reaction time (IND speed); Working memory speed (ONB speed), Working memory accuracy (ONB accuracy), Visuospatial executive function (GML errors); Psychomotor-attention (DET and IDN); Working-memory and learning (OCL and ONB), Global cognition (DET, IDN, and OCL)



**Supplementary Figure 1.** Scatterplots of the relationship between measures of lower limb muscle strength (leg press three-repetition maximum), handgrip strength (handheld dynamometry), gait speed (4m usual walk), cardiorespiratory fitness (400m walk) and dual-task mobility (timed-up-

and-go with cognitive task) and visuo-motor speed (trail making test A), task switching (trail making test B), executive function (trail making test B-A) in men treated with androgen deprivation therapy (ADT), prostate cancer controls (PCON) and non-PCA controls (CON). ^ P<0.05 compared to CON.



**Supplementary Figure 2.** Scatterplots of the relationship between measures of lower limb muscle strength (leg press three-repetition maximum), handgrip strength (handheld dynamometry), gait speed (4m usual walk), cardiorespiratory fitness (400m walk) and dual-task mobility (timed-up-and-go with cognitive task) and Cogstate psychomotor-attention composite score, Cogstate working memory-learning composite score and Cogstate global cognitive function score in men treated with androgen deprivation therapy (ADT), prostate cancer controls (PCON) and non-PCA controls (CON). ^ P<0.05 compared to CON.