

Associating serum testosterone levels with African ancestral prostate cancer health disparities

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SUPPLEMENTARY DATA

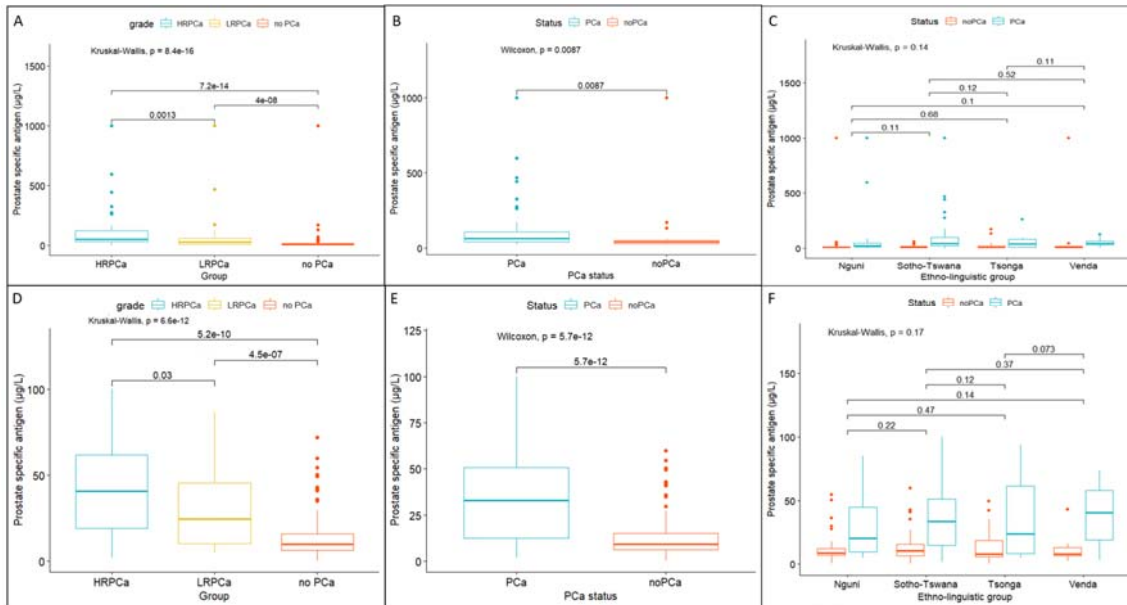


Figure S1. Boxplots of prostate specific antigen levels of men with and without prostate cancer (PCa). Prostate specific antigen levels (PSA) by **(A)** PCa clinicopathological group including high-risk (HRPCa), low-risk (LRPCa) and no PCa, **(B)** PCa status for those with PSA levels $\geq 20 \mu\text{g/L}$ and **(C)** ethnolinguistic group. Excluding for patient outliers defined here as a PSA levels $>105 \mu\text{g/L}$, PSA levels were redefined by **(D)** PCa clinicopathological group, **(E)** PCa status for those with PSA levels $\geq 20 \mu\text{g/L}$ and **(F)** ethnolinguistic group.

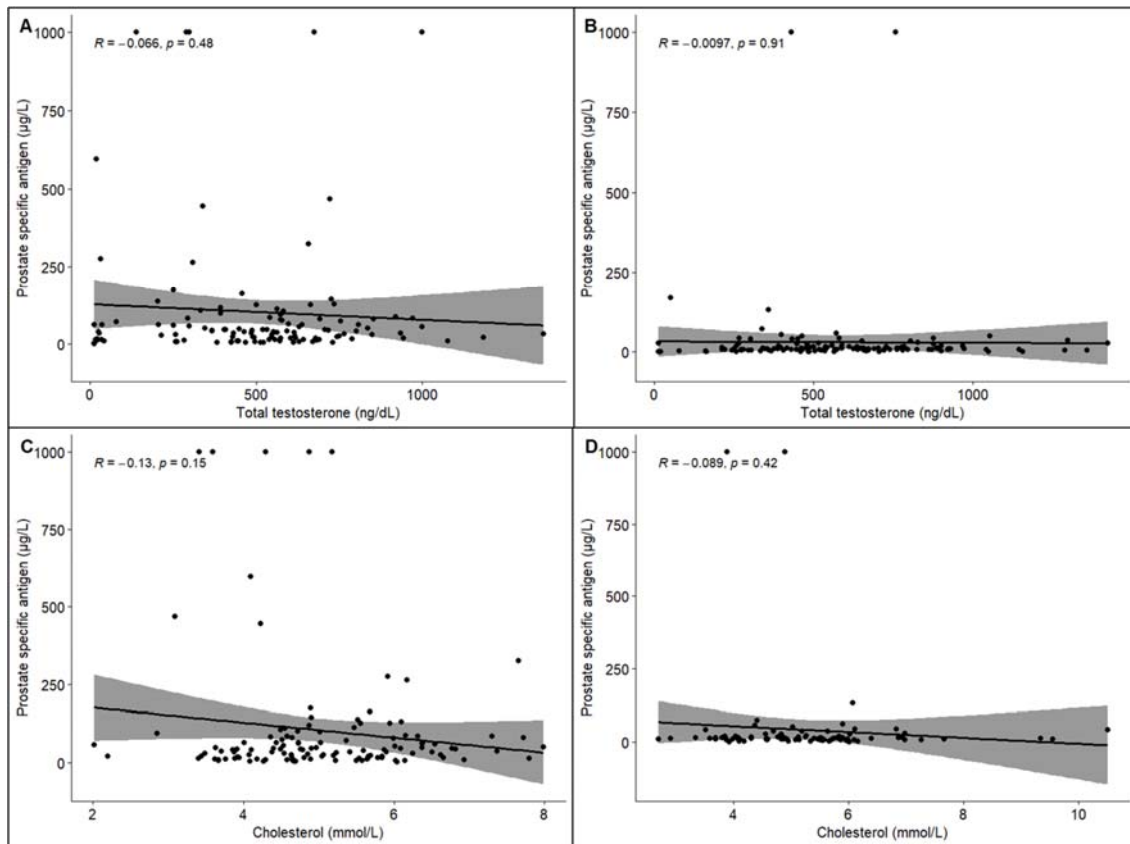


Figure S2: Scatterplots depicting the correlation between Prostate Specific Antigen (PSA) and testosterone or cholesterol levels for Black South African men by prostate cancer (PCa) status. PSA and testosterone level correlations for **(A)** PCa cases and **(B)** controls, and for PSA and cholesterol level correlations for **(C)** PCa cases and **(D)** controls.

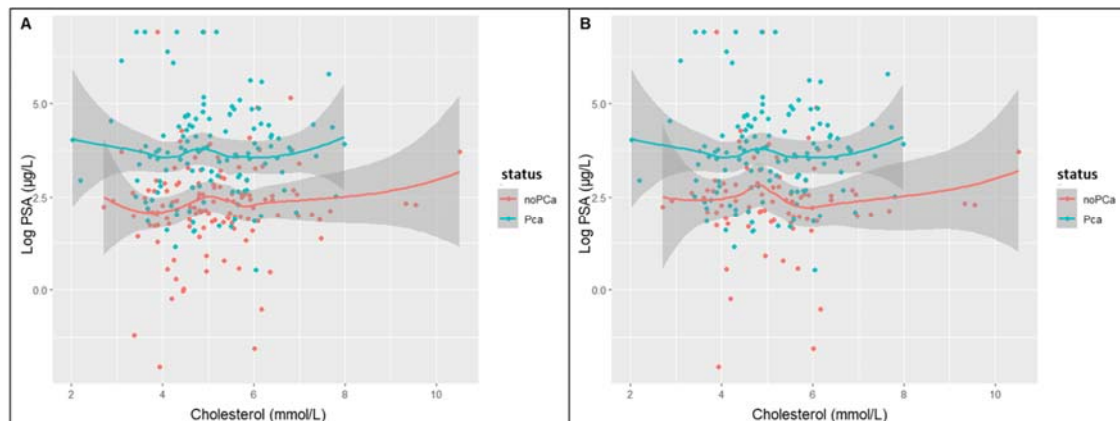


Figure S3: LOESS curves depicting the relationship between prostate specific antigen (PSA) and cholesterol levels by PCa status. **(A)** LOESS curve of PSA and cholesterol by PCa status. **(B)** LOESS curve of transformed PSA and cholesterol.

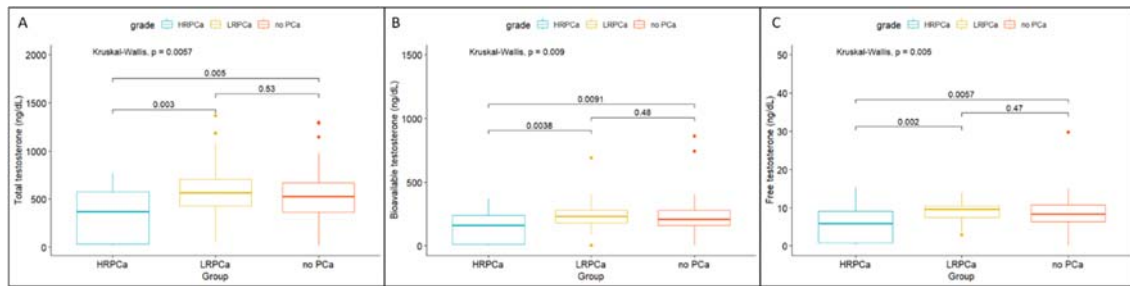


Figure S4: Boxplots of serum testosterone levels of men ≥ 65 years, according to prostate cancer (PCa) status in black South African men with ($n=82$) or without ($n=75$) prostate cancer (PCa), including high-risk (HRPCa) or low-risk (LRPCa) disease defined by pathology. Boxplot of PCa status and risk for total testosterone (A), bioavailable testosterone (B), and free testosterone (C).

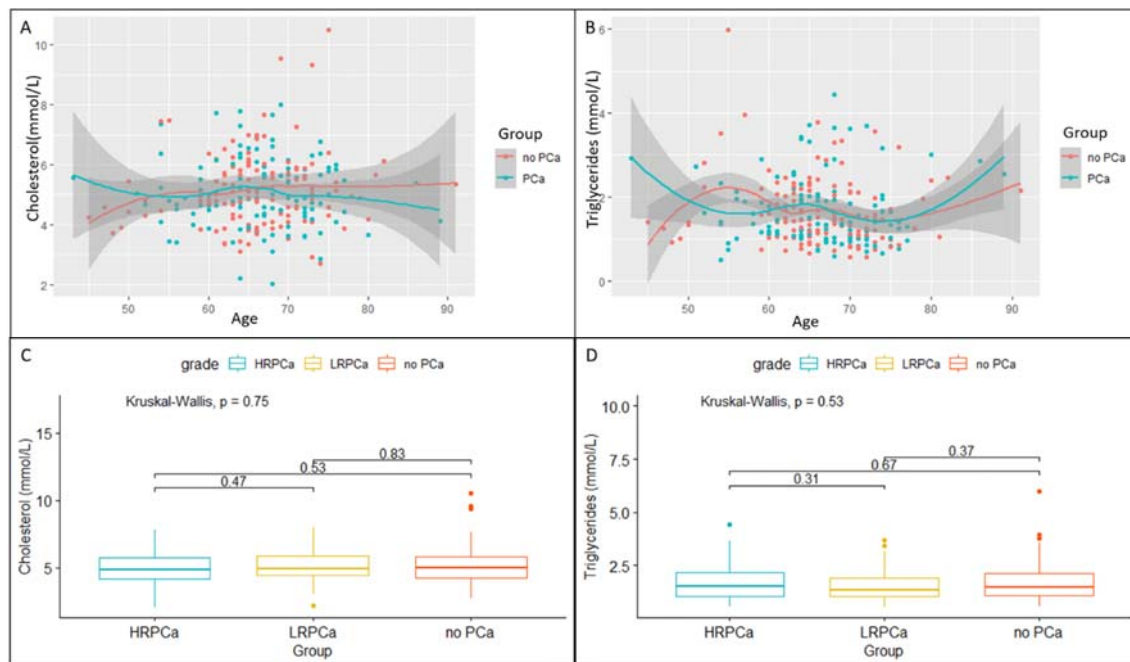


Figure S5: LOESS curves representing prostate cancer (PCa) status by age for serum cholesterol (A) and triglycerides (B) levels. Boxplots representing cholesterol (C) and triglycerides (D) levels by clinicopathological presentation defined as high-risk (HRPCa), low-risk (LRPCa) or no prostate cancer (no PCa).

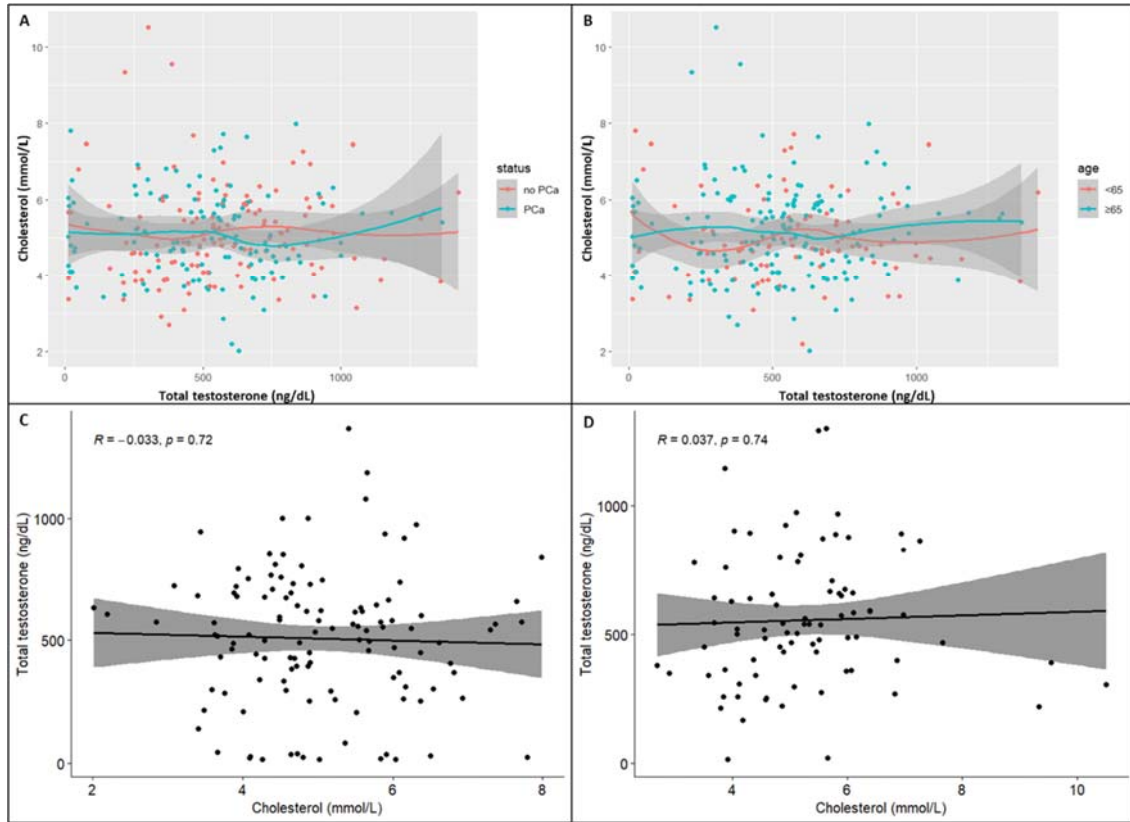


Figure S6: LOESS curves depicting the relationship between serum cholesterol and total testosterone levels by PCa status (A) and age (B). Scatter plots depicting the correlation between serum cholesterol and testosterone in men with PCa (C) and without PCa (D).

Table S1: Mean testosterone levels in younger (<65 years) and older (≥65 years) Black South African men defined by PCa status.

Age	40–64 years			≥65 years		
	PCa Controls (n = 46)	PCa Cases (n = 45)	Fold ¹	PCa Controls (n = 82)	PCa Cases (n = 75)	Fold ²
Total T (ng/dL)	590.45	585.70	0.99	561.89	479.55	1.17
Free T (ng/dL)	9.41	12.54	1.33	9.50	7.37	1.29
Bioavailable T (ng/dL)	245.28	340.42	1.39	247.26	188.40	1.31

Abbreviations: PCa: Prostate Cancer; T: Testosterone

Fold¹: Fold increase between PCa cases and PCa controls

Fold²: Fold increase between PCa controls and PCa cases