

SUPPLEMENTARY APPENDIX

Supplementary Figure Legend

Supplementary Figure 1. Distribution of baseline total testosterone levels.

Supplementary Figure 2. Association between baseline total testosterone gradations and all-cause mortality in dialysis patients. Figures present hazard ratios (short-dashed lines indicate 95% CIs) for total testosterone analyzed as a spline with knots at the 33rd and 66th percentiles of observed values (total testosterone levels 227 and 361ng/dl, respectively). A histogram of observed baseline testosterone values and a hazard reference ratio of 1 (long-dashed line) is overlaid. Testosterone levels exceeding the 97.5th percentile of observed values were excluded for the purposes of the spline analyses. Case-mix adjusted analyses adjusted for calendar quarter of study entry, age, sex, race/ethnicity, and diabetes; Expanded case-mix models adjusted for case-mix model covariates, as well as dialysis vintage, cause of end-stage renal disease, modality, dialysis access, congestive heart failure, coronary heart disease, and serum albumin level.

Supplementary Table 1. Distribution of total testosterone levels across age strata.

Age (years)	N	Mean \pm SD	Median (IQR)
		Total Testosterone (ng/dl)	Total Testosterone (ng/dl)
< 40	66	371 \pm 222	336 (224, 480)
40-60	289	353 \pm 179	338 (232, 458)
> 60	269	280 \pm 192	247 (158, 359)

Supplementary Table 2. Association between testosterone quartile and all-cause mortality.

Quartile	Minimally adjusted		Case-mix adjusted		Expanded case-mix + laboratory adjusted	
	HR (95%CI)	p*	HR (95%CI)	p**	HR (95%CI)	p***
1	2.63 (1.57-4.41)	<0.001	2.17 (1.28-3.69)	<0.001	2.32 (1.33-4.06)	0.003
2	1.72 (0.99-2.99)	0.06	1.59 (0.91-2.79)	0.11	1.80 (0.99-3.28)	0.05
3	1 (ref)	N/A	1 (ref)	N/A	1 (ref)	N/A
4	0.54 (0.26-1.12)	0.10	0.61 (0.29-1.26)	0.18	0.68 (0.32-1.42)	0.30

Minimally adjusted analyses p-for-trend: <0.001. **Case-mix analyses p-for-trend: <0.001. *Expanded case-mix+laboratory analyses p-for-trend: 0.001. Minimally adjusted analyses adjusted for calendar quarter of study entry; Case-mix adjusted analyses adjusted for minimally adjusted model covariates, as well as age, sex, race/ethnicity, and diabetes; Expanded case-mix models adjusted for case-mix model covariates, as well as dialysis vintage, cause of end-stage renal disease, modality, dialysis access, congestive heart failure, coronary heart disease, and serum albumin level.*

Supplementary Table 3. Associations between baseline total testosterone level (dichotomized as total testosterone level <300ng/dl vs. ≥300ng/dl; reference: total testosterone ≥300ng/dl) and all-cause mortality.

	Minimally adjusted		Case-mix adjusted		Expanded case-mix + laboratory adjusted	
Subgroups	HR (95% CI)	p-interaction	HR (95% CI)	p-interaction	HR (95% CI)	p-interaction
Age						
<55 years old	2.57 (1.18, 5.63)	0.72	2.96 (1.36, 6.40)	0.78	4.90 (1.81, 13.2)	0.74
≥55 years old	2.81 (1.63, 4.84)		2.37 (1.36, 4.12)		2.42 (1.31, 4.50)	
Race						
Black	8.44 (2.97, 24.0)	0.03	7.72 (2.66, 22.5)	0.03	9.87 (2.84, 34.3)	0.07
Non-Black	1.86 (1.14, 3.04)		1.63 (1.00, 2.66)		1.65 (0.96, 2.84)	
Diabetes						
Presence	2.94 (1.75, 4.95)	0.77	2.40 (1.42, 4.08)	0.86	2.64 (1.50, 4.65)	0.77
Absence	3.19 (1.44, 7.06)		2.42 (1.07, 5.47)		2.35 (0.92, 5.97)	
CHF						
Presence	4.99 (2.37, 10.5)	0.07	4.13 (1.94, 8.82)	0.08	3.94 (1.74, 8.93)	0.15
Absence	2.13 (1.20, 3.78)		1.67 (0.91, 3.04)		1.88 (0.97, 3.63)	
CHD						
Presence	5.10 (1.85, 14.1)	0.28	4.81 (1.68, 13.8)	0.13	28.3 (5.27, 152)	0.04
Absence	2.52 (1.55, 4.09)		1.81 (1.10, 3.00)		1.73 (1.01, 2.97)	
Modality						
Hemodialysis	3.77 (2.27, 6.26)	0.04	3.07 (1.83, 5.15)	0.15	3.02 (1.74, 5.24)	0.11
Peritoneal dialysis	1.02 (0.37, 2.78)		0.82 (0.27, 2.46)		2.35 (0.54, 10.3)	
Serum albumin						
<4.0 g/dl	3.04 (1.86, 4.97)	0.37	2.75 (1.67, 4.54)	0.15	2.89 (1.72, 4.86)	0.07
≥4.0 g/dl	3.23 (1.23, 8.47)		1.74 (0.62, 4.90)		1.63 (0.44, 6.09)	
Vintage						
<1 year	3.93 (2.09, 7.38)	0.56	2.59 (1.35, 4.94)	0.69	2.69 (1.36, 5.32)	0.49
≥1 year	2.31 (1.26, 4.26)		2.16 (1.17, 4.00)		2.42 (1.23, 4.76)	
Body mass index						
<25 kg/m ²	3.88 (1.86, 8.09)	0.20	3.76 (1.80, 7.84)	0.26	4.75 (1.92, 11.76)	0.46
≥25 kg/m ²	4.40 (1.99, 9.74)		3.71 (1.64, 8.40)		3.35 (1.39, 8.08)	

Minimally adjusted analyses adjusted for calendar quarter of study entry; Case-mix adjusted analyses adjusted for minimally adjusted model covariates, as well as age, sex, race/ethnicity, and diabetes; Expanded case-mix models adjusted for case-mix model covariates, as well as dialysis vintage, cause of end-stage renal disease, modality, dialysis access, congestive heart failure, coronary heart disease, and serum albumin level.