SUGGESTED ELECTRONIC APPENDIX

Figure Legends

Figure S1: Flow chart of patients' selection

Figure S2: Hazard/Odds ratio (95% confidence intervals) of post-transplant outcomes (Panel A: all-cause mortality; Panel B: cardiovascular mortality, Panel C: infectious mortality, Panel D: graft loss; Panel E: delayed graft function; Panel F: acute rejection) across the entire range of pre-transplant serum calcium-phosphorus product level using Cox regression analyses in 11,836 long-term dialysis patients who underwent renal transplantation and who were observed over a 6-year study period (7/2001-6/2007).

Model adjusted for age, gender, recipient race-ethnicity, diabetes mellitus, dialysis vintage, primary insurance, marital status, standardized mortality ratio of the dialysis clinic during entry quarter, dialysis dose as indicated by Kt/V (single pool), presence or absence of a hemodialysis catheter, and residual renal function during the entry quarter, 8 co-morbidities, body mass index, nPNA, serum or blood concentrations of TIBC, ferritin, iPTH, bicarbonate, peripheral white blood cell count, lymphocyte percentage, albumin, donor type, donor age, donor gender, panel reactive antibody titer (last value prior to transplant), number of HLA mismatches, cold ischemia time, DGF and extended donor criteria
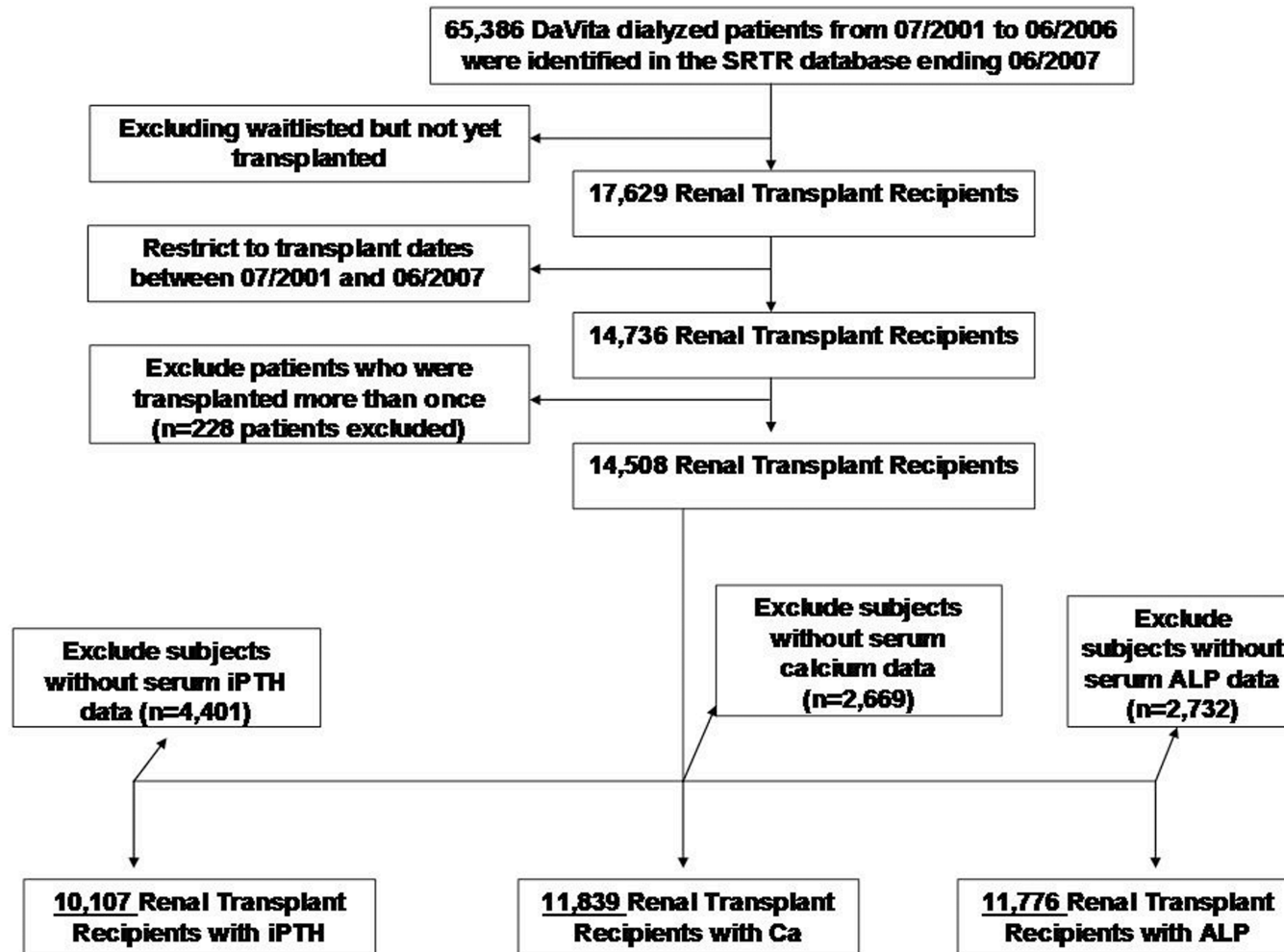
Figure S1:


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                    ┌──────────────────────────────────────────────────┐
                    │ 65,386 DaVita dialyzed patients from 07/2001 to 06/2006 │
                    │  were identified in the SRTR database ending 06/2007 │
                    └──────────────────────────────────────────────────┘
                                          │
  ┌─────────────────────────┐            ▼
  │ Excluding waitlisted but not yet │◄── │
  │        transplanted       │     ┌──────────────────────────────────┐
  └─────────────────────────┘      │ 17,629 Renal Transplant Recipients │
                                   └──────────────────────────────────┘
                                          │
  ┌─────────────────────────┐            ▼
  │ Restrict to transplant dates │◄──
  │ between 07/2001 and 06/2007 │    ┌──────────────────────────────────┐
  └─────────────────────────┘      │ 14,736 Renal Transplant Recipients │
                                   └──────────────────────────────────┘
                                          │
  ┌─────────────────────────┐            ▼
  │ Exclude patients who were │◄──
  │ transplanted more than once │   ┌──────────────────────────────────┐
  │ (n=228 patients excluded) │    │ 14,508 Renal Transplant Recipients │
  └─────────────────────────┘      └──────────────────────────────────┘
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Exclude subjects without serum iPTH data (n=4,401)

Exclude subjects without serum calcium data (n=2,669)

Exclude subjects without serum ALP data (n=2,732)

10,107 Renal Transplant Recipients with iPTH

11,839 Renal Transplant Recipients with Ca

11,776 Renal Transplant Recipients with ALP
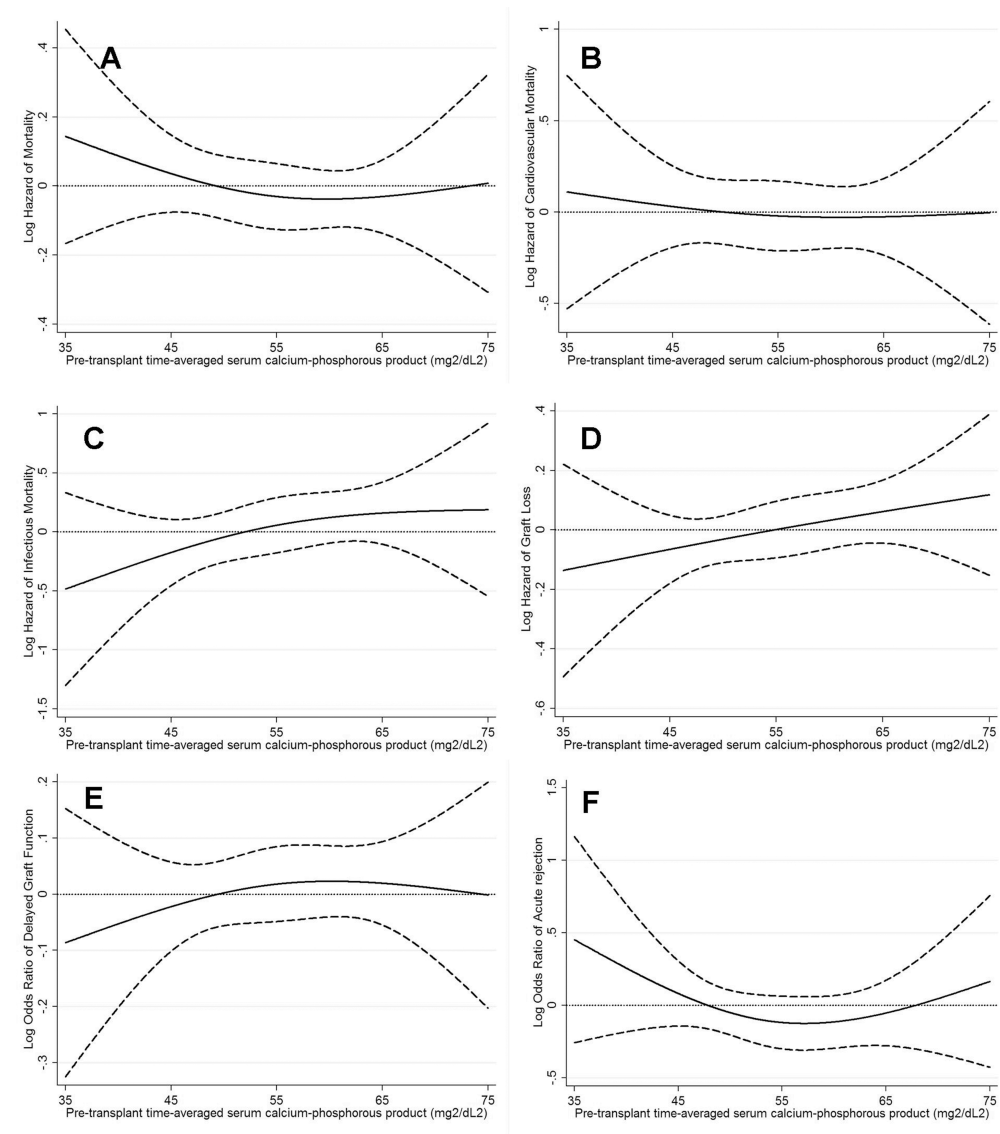
Figure S2:

Table S1: Hazard/Odds ratio (95% confidence intervals) of post-transplant all-cause-, cardiovascular and infectious death or graft failure or delayed graft function or acute rejection comparing pre-transplant **serum alkaline phosphatase** categories (**80-<120 U/L the reference**) using Cox regression and logistic regression analyses in 11,420 dialysis **patients without liver disease*** who underwent renal transplantation and observed for up to 6 years (7/2001-6/2007)

Pre-transplant serum Alkaline Phosphatase level (U/L)	+ fully adjusted data** (n=4,747)	
A, Graft failure censored *all-cause* death	HR (95% CI)	P-value
<80	0.98 (0.76-1.25)	0.85
80 -<120	1.00	N/A
120-<160	1.52 (1.17-1.98)	0.002
≥160	1.66 (1.21-2.29)	0.002
B, Graft failure censored *cardiovascular* death	HR (95% CI)	P-value
<80	1.17 (0.69-1.98)	0.57
80 -<120	1.00	N/A
120-<160	2.16 (1.27-3.66)	0.004

≥160	1.92 (1.00-3.70)	0.05
C, Graft failure censored *infectious* death	*HR (95% CI)*	*P-value*
<80	1.01 (0.55-1.85)	0.97
80 -<120	1.00	N/A
120-<160	1.21 (0.62-2.34)	0.58
≥160	2.06 (1.04-4.07)	0.04
D, All-cause death censored graft failure	*HR (95% CI)*	*P-value*
<80	1.14 (0.89-1.46)	0.30
80 -<120	1.00	N/A
120-<160	1.22 (0.93-1.61)	0.16
≥160	1.09 (0.79-1.52)	0.60
E, Delayed Graft Function	*OR (95% CI)*	*P-value*
	+ fully adjusted data ** (n=4,747)	

	OR (95% CI)	P-value
<80	1.02 (0.87-1.20)	0.81
80 -<120	1.00	N/A
120-<160	1.09 (0.90-1.32)	0.37
≥160	1.12 (0.88-1.41)	0.35
F, Acute Rejection	*OR (95% CI)*	*P-value*
	+ fully adjusted data ** (n=2,730)	
<80	1.08 (0.64-1.81)	0.78
80 -<120	1.00	N/A
120-<160	1.31 (0.76-2.25)	0.33
≥160	1.13 (0.58-2.22)	0.71

Footnote:
* liver disease was defined if AST>40 U/L
**adjusted for age, gender, recipient race-ethnicity, diabetes mellitus, dialysis vintage, primary insurance, marital status, standardized mortality ratio of the dialysis clinic during entry quarter, dialysis dose as indicated by Kt/V (single pool), presence or absence of a hemodialysis catheter, and residual renal function during the entry quarter and 8 co-morbidities, body mass index, nPNA, serum or blood concentrations of TIBC, ferritin, calcium, phosphorous, iPTH, bicarbonate, peripheral white blood cell count, lymphocyte percentage and albumin, donor type, donor age, donor gender, panel reactive antibody titer (last value

prior to transplant), number of HLA mismatches, cold ischemia time, DGF (except when DGF was a dependent variable in our logistic regression models), extended donor criteria

Table S2: Hazard/Odds ratio (95% confidence intervals) of post-transplant all-cause-, cardiovascular and infectious death or graft failure or delayed graft function or acute rejection comparing pre-transplant **serum calcium-phosphorus product categories (45-<55 mg^2/dL^2 the reference)** using Cox regression and logistic regression analyses in 11,836 dialysis patients who underwent renal transplantation and observed for up to 6 years (7/2001-6/2007)

Pre-transplant serum calcium-phosphorus product level (mg^2/dL^2)	unadjusted (n=11,836)		+ case-mix adjusted* (n=9,255)		+ MMI adjusted** (n=7,820)		+ transplant data adjusted*** (n=4,852)	
A, Graft failure censored *all-cause* death	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*
<45	1.19 (1.00-1.42)	0.05	1.15 (0.94-1.40)	0.18	1.10 (0.88-1.37)	0.41	1.09 (0.84-1.42)	0.52
45 -<55	1.00	N/A	1.00	N/A	1.00	N/A	1.00	N/A
55-<65	0.84 (0.70-0.99)	0.05	0.94 (0.77-1.15)	0.55	0.91 (0.73-1.13)	0.38	0.92 (0.72-1.19)	0.53
≥65	0.79 (0.53-0.89)	0.002	0.96 (0.76-1.22)	0.76	0.98 (0.75-1.28)	0.88	0.97 (0.70-1.33)	0.84
B, Graft failure censored *cardiovascular* death	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*

	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value
<45	1.00 (0.70-1.41)	0.98	1.18 (0.78-1.79)	0.43	1.11 (0.71-1.74)	0.66	0.97 (0.56-1.67)	0.91
45 -<55	1.00	N/A	1.00	N/A	1.00	N/A	1.00	N/A
55-<65	0.88 (0.63-1.22)	0.43	0.96 (0.65-1.43)	0.85	0.78 (0.50-1.21)	0.27	0.90 (0.54-1.50)	0.68
≥65	0.79 (0.54-1.15)	0.22	1.12 (0.72-1.74)	0.62	1.12 (0.68-1.82)	0.66	1.05 (0.57-1.92)	0.88
C, Graft failure censored *infectious* death	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*
<45	0.94 (0.63-1.38)	0.71	0.85 (0.52-1.40)	0.53	0.82 (0.47-1.43)	0.48	0.74 (0.36-1.49)	0.39
45 -<55	1.00	N/A	1.00	N/A	1.00	N/A	1.00	N/A
55-<65	0.86 (0.59-1.24)	0.41	1.16 (0.76-1.78)	0.49	1.28 (0.81-2.02)	0.29	1.35 (0.76-2.39)	0.30
≥65	0.67 (0.43-1.03)	0.07	1.09 (0.65-1.83)	0.74	1.15 (0.64-2.06)	0.65	1.26 (0.60-2.67)	0.54
D, All-cause death censored graft failure	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*	*HR (95% CI)*	*P-value*

<45	0.96 (0.82-1.12)	0.62	1.14 (0.92-1.41)	0.22	1.08 (0.86-1.36)	0.51	1.06 (0.78-1.44)	0.70
45 -<55	1.00	N/A	1.00	N/A	1.00	N/A	1.00	N/A
55-<65	0.98 (0.85-1.13)	0.80	0.95 (0.79-1.14)	0.56	0.94 (0.77-1.14)	0.53	1.05 (0.81-1.36)	0.71
≥65	1.16 (1.00-1.34)	0.05	1.03 (0.85-1.25)	0.75	1.03 (0.83-1.28)	0.80	1.20 (0.91-1.60)	0.21
E, Delayed Graft Function	*OR (95% CI)*	*P-value*	*OR (95% CI)*	*P-value*	*OR (95% CI)*	*P-value*	*OR (95% CI)*	*P-value*
	unadjusted (n=11,201)		**+ case-mix adjusted* (n=8,810)**		**+ MMI adjusted** (n=7,457)**		**+ transplant data adjusted *** (n=4,852)**	
<45	0.85 (0.74-0.97)	0.02	0.92 (0.78-1.07)	0.28	0.96 (0.80-1.14)	0.61	0.94 (0.77-1.15)	0.58
45 -<55	1.00	N/A	1.00	N/A	1.00	N/A	1.00	N/A
55-<65	1.06 (0.94-1.19)	0.36	1.00 (0.87-1.14)	0.97	0.93 (0.80-1.08)	0.33	0.96 (0.81-1.13)	0.61
≥65	1.09 (0.95-1.24)	0.21	1.11 (0.95-1.29)	0.20	0.98 (0.82-1.18)	0.86	0.99 (0.80-1.21)	0.90
F, Acute Rejection	*OR (95% CI)*	*P-value*	*OR (95% CI)*	*P-value*	*OR (95% CI)*	*P-value*	*OR (95% CI)*	*P-value*

	unadjusted (n=6,333)		+ case-mix adjusted* (n=5,210)		+ MMI adjusted** (n=4,123)		+ transplant data adjusted *** (n=2,793)	
<45	0.96 (0.67-1.39)	0.85	1.22 (0.80-1.86)	0.36	1.10 (0.67-1.80)	0.72	1.48 (0.82-2.68)	0.19
45 -<55	1.00	N/A	1.00	N/A	1.00	N/A	1.00	N/A
55-<65	1.15 (0.84-1.59)	0.39	1.13 (0.78-1.64)	0.52	1.05 (0.69-1.59)	0.82	1.05 (0.62-1.77)	0.86
≥65	1.46 (1.04-2.07)	0.03	1.38 (0.92-2.09)	0.12	1.33 (0.81-2.16)	0.26	1.40 (0.76-2.55)	0.28

Footnote:
*adjusted for age, gender, recipient race-ethnicity, diabetes mellitus, dialysis vintage, primary insurance, marital status, standardized mortality ratio of the dialysis clinic during entry quarter, dialysis dose as indicated by Kt/V (single pool), presence or absence of a hemodialysis catheter, and residual renal function during the entry quarter and 8 co-morbidities

**adjusted for all of the covariates plus body mass index, nPNA, serum or blood concentrations of TIBC, ferritin, iPTH, bicarbonate, peripheral white blood cell count, lymphocyte percentage and albumin

*** adjusted for all of the above plus donor type, donor age, donor gender, panel reactive antibody titer (last value prior to transplant), number of HLA mismatches, cold ischemia time, DGF (except when DGF was a dependent variable in our logistic regression models), extended donor criteria