

Supplemental Figure Legends:

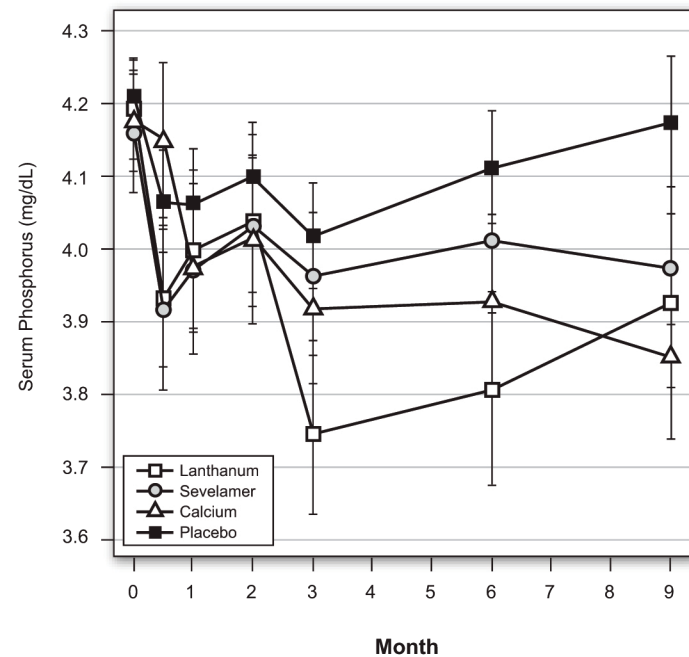
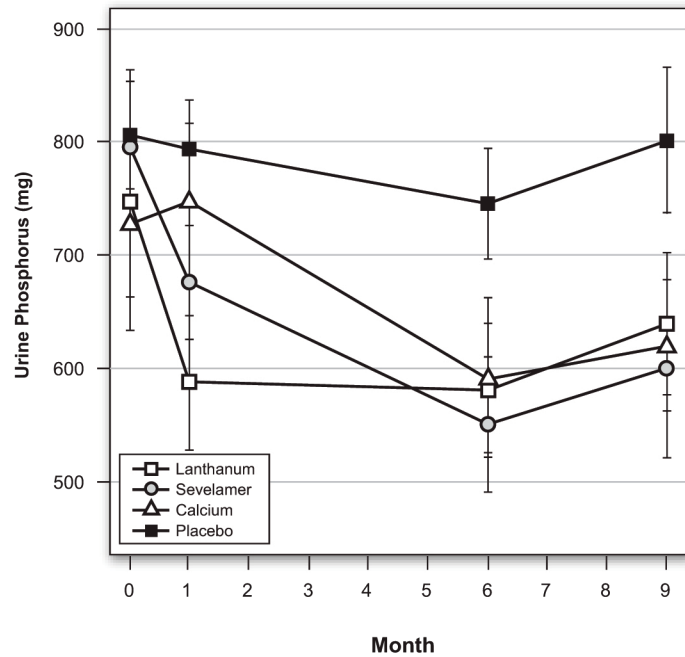
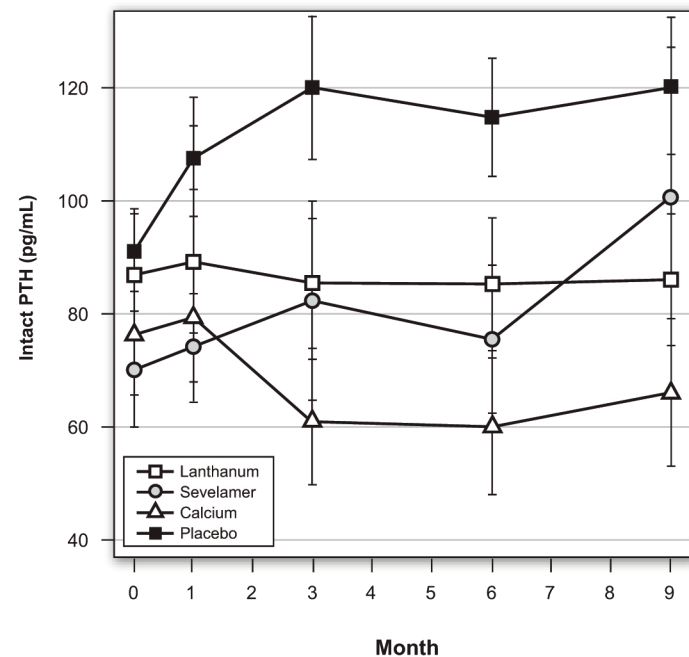
Figure 1: Mean (SE) serum phosphorus (panel A), 24 hour urine phosphorus (panel B), PTH (panel C), and median C-terminal FGF23 (IQR) (panel D) and intact FGF23 (IQR) (panel E) over the study period between each active and all placebo-treated patients. For intact FGF23, Wilcoxon rank-sum lanthanum versus placebo, $p=0.30$; calcium acetate versus placebo, $p=0.028$; sevelamer versus placebo, $p=0.002$.

Figure 2: Percent change in median (IQR) annualized total coronary artery (panel A), abdominal aorta (panel B), thoracic aorta (panel C) calcium volume scores among each active and all placebo-treated patients. Median (IQR) percent change in annualized bone mineral density among each active and all placebo-treated patients (panel D).

Supplemental Table 1: Select Biochemical Parameters on Study

Parameter	All Active N=88		All Placebo N=57		Significance*	Lanthanum N=28		Sevelamer N=30		Calcium N=30	
	Baseline	Month 9	Baseline	Month 9		Baseline	Month 9	Baseline	Month 9	Baseline	Month 9
eGFR (mean, mL/min/1.73m ² ± SD)	31.5 ± 8.1	31.1 ± 9.0	30.4 ± 8.5	28.9 ± 9.0	p=0.90	33.2 ± 7.9	33.0 ± 9.4	31.8 ± 9.0	30.5 ± 8.0	29.6 ± 7.1	30.0 ± 9.4
Serum Albumin (mean, g/dL ± SD)	4.17 ± 0.3	4.1 ± 0.34	4.15 ± 0.32	4.1 ± 0.36	p=0.72	4.14 ± 0.24	4.03 ± 0.32	4.21 ± 0.33	4.14 ± 0.37	4.16 ± 0.32	4.08 ± 0.32
Serum Hemoglobin (mean, g/dL ± SD)	13.2 ± 1.6	13.1 ± 1.5	13.5 ± 1.6	13.3 ± 1.9	p=0.40	13.1 ± 1.4	13.2 ± 1.7	13.5 ± 1.8	13.3 ± 1.7	12.9 ± 1.6	12.9 ± 1.4
Serum Calcium (mean, mg/dL ± SD)	9.3 ± 0.4	9.3 ± 0.5	9.3 ± 0.4	9.2 ± 0.5	p=0.12	9.2 ± 0.4	9.2 ± 0.4	9.3 ± 0.5	9.3 ± 0.5	9.3 ± 0.3	9.4 ± 0.6
Serum Bicarbonate (mean, mEq/dL ± SD)	22.0 ± 3.1	22.4 ± 2.7	21.5 ± 2.9	20.7 ± 3.1	p=0.02	21.9 ± 2.9	21.8 ± 2.4	22.0 ± 3.1	22.6 ± 3.0	22.1 ± 3.3	22.7 ± 2.6
Serum LDL cholesterol (mean, mg/dL ± SD)	95.4 ± 30.0	81.9 ± 26.0	97.0 ± 33.2	94 ± 31.6	p=0.01	89.4 ± 26.8	88.5 ± 21.6	100.3 ± 35.6	67.0 ± 24.0	96.0 ± 26.5	90.7 ± 25.7
24-Hour Urine Calcium (mg ± SD)	55.6 ± 41.7	65.9 ± 65.0	60.9 ± 47.3	53.2 ± 46	p=0.09	52.7 ± 40.2	52.2 ± 56.1	56.4 ± 43.3	56.9 ± 44.8	57.6 ± 42.6	85.8 ± 84.7
Estimated Protein Intake (g/kg/day ± SD)	0.86 ± 0.31	0.87 ± 0.33	0.83 ± 0.22	0.83 ± 0.26	p=0.56	0.88 ± 0.41	0.86 ± 0.36	0.86 ± 0.25	0.84 ± 0.28	0.92 ± 0.3	0.91 ± 0.3
Estimated Phosphorus Intake (mean, g/day ± SD)	0.97 ± 0.45	0.97 ± 0.38	0.97 ± 0.32	0.97 ± 0.35	p=0.74	0.99 ± 0.62	0.93 ± 0.36	1.01 ± 0.34	0.94 ± 0.36	0.94 ± 0.36	1.01 ± 0.37
1,25 Dihydroxyvitamin D (mean, pg/mL)	25.7 ± 9.4	24.6 ± 12.8	27.2 ± 10.3	29.9 ± 9.6	p=0.004	26.9 ± 10.0	30.4 ± 14.5	24.7 ± 10.3	26.8 ± 12.3	25.5 ± 8.1	17.4 ± 8.2

* Based on Wilcoxon rank-sum test comparing change from baseline and month 9 between combined active and placebo.

A**Serum Phosphorus****B****24 Hour Urine Phosphorus****C****Intact PTH****D****Change in Bone Mineral Density**