Supplementary Table 1: Treatment effect of more frequent hemodialysis on left ventricular mass reduction in subgroups of parameters tested for interaction.

Daily Trial Parameter	N	Group	Treatment effect (95% CI)	P
Serum Sodium Concentration (SNa+)	102	SNa+ <= 138 mEq/L	-28 (-40.5 to -15.4) g	
	95	SNa+ > 138 mEq/L	-2 (-15.5 to 11.5) g	
	197	continuous interaction	3.1 (0.4 to 5.9) g	0.027
Serum Sodium Gradient (GNa+)	62	GNa+ <= 0 mEq/L	-0.7 (-18.2 to 16.8) g	
	111	GNa+ > 0 mEq/L	-25.2 (-37.6 to -12.7) g	
	173	continuous interaction	-2.7 (-5.5 to 0.1) g	0.061
Time-integrated sodium-adjusted fluid load (TIFL)	111	TIFL <= 3 L x day	-5.6 (-21.5 to 10.4) g	
	113	TIFL > 3 L x day	-26 (-39.4 to -12.6) g	
	224	continuous interaction	-5.8 (-27.9 to -7.3) g	0.22

The treatment effect of frequent in-center dialysis may differ by the relative level of certain measures. We tested this by creating interaction terms between the binary treatment variable and the continuous form of each parameter. Results reflect the change in LVM (g) associated with a per-unit parameter among the frequent as opposed to the conventional treatment arm. Each parameter was also divided into “low” and “high” value ranges, then frequent vs. conventional treatment effects were calculated within each range, just as an illustration.”

Supplementary Table 2: Baseline characteristics of FHN Nocturnal Trial participants who had baseline sodium concentration values

Baseline characteristics of FHN Nocturnal Trial participants with baseline sodium concentration values								
Characteristic	**N (available data for respective parameter)**	**3X Nocturnal Pts (N=39)**	**3X Nocturnal Pts with SNa=<138 mEq/L (N=21)**	**3X Nocturnal Pts with SNa>138 mEq/L (N=18)**	**N (available data for respective parameter)**	**6X Nocturnal Pts (N=43)**	**6X Nocturnal Pts with SNa=<138 mEq/L (N=21)**	**6X Nocturnal Pts with SNa>138 mEq/L (N=22)**
Age (yrs.)	39	54.1 ± 13.1	51.9 ± 14.8	55.9 ± 11.5	43	52.3 ± 14.4	52.3 ± 14.4	52.3 ± 14.4
Female (%)	39	13 (33%)	5 (28%)	8 (38%)	43	15 (35%)	15 (35%)	15 (35%)
Race Black (%) White (%) Native American, Aboriginal Canadian, Alaskan Native (%) Asian (%) Native Hawaiian or other Pacific Islander (%) Other/mixed/unknown (%)	39	. 11 (28%) 19 (49%) 2 (5%) 6 (15%) 0 1 (3%)	. 4 (22%) 7 (39%) 1 (6%) 5 (28%) 0 1 (6%)	. 7 (33%) 12 (57%) 1 (5%) 1 (5%) 0 0	43	. 12 (28%) 25 (58%) 1 (2%) 5 (12%) 0 0	. 12 (28%) 25 (58%) 1 (2%) 5 (12%) 0 0	. 12 (28%) 25 (58%) 1 (2%) 5 (12%) 0 0
Ave. Weekly Predialysis Systolic BP (mmHg)	39	154 ± 23	149 ± 24	157 ± 21	43	145 ± 13	145 ± 13	145 ± 13
Ave. Weekly Predialysis Diastolic BP (mmHg)	39	83.7 ± 13.1	81.3 ± 14.8	85.7 ± 11.4	43	79.6 ± 10.8	79.6 ± 10.8	79.6 ± 10.8
Ave. Weekly Postdialysis Systolic BP (mmHg)	39	141 ± 21	142 ± 20	140 ± 22	43	135 ± 17	135 ± 17	135 ± 17
Ave. Weekly Postdialysis Diastolic BP (mmHg)	39	76.6 ± 13.7	74.9 ± 12.9	78.1 ± 14.4	43	74.6 ± 11.9	74.6 ± 11.9	74.6 ± 11.9
Left Ventricular Mass (g)	39	138 ± 42	128 ± 39	147 ± 43	43	138 ± 48	138 ± 48	138 ± 48
Left Ventricular End-diastolic Vol. (ml)	39	154 ± 44	147 ± 38	159 ± 49	43	166 ± 51	166 ± 51	166 ± 51
Extra-cellular fluid volume (L)	36	23.6 ± 5.5	20.4 ± 3.8	25.9 ± 5.4	38	24.5 ± 6.3	24.5 ± 6.3	24.5 ± 6.3
Extra-cellular fluid volume / Total Bodby Water (L) [BIA]	36	0.514 ± 0.072	0.483 ± 0.078	0.535 ± 0.059	38	0.521 ± 0.073	0.521 ± 0.073	0.521 ± 0.073
Extra-cellular fluid volume / Ave. Weekly Postdialysis Wt. (kg)	36	0.292 ± 0.040	0.287 ± 0.042	0.296 ± 0.039	38	0.286 ± 0.030	0.286 ± 0.030	0.286 ± 0.030
IDWG (% post HD body weight)	29	3.00 ± 1.48	3.48 ± 1.47	2.61 ± 1.42	33	2.40 ± 1.46	2.78 ± 1.55	1.99 ± 1.28
IDWG (% of ECV)	26	10.6 ± 5.3	13.1 ± 5.4	9.01 ± 4.77	28	8.61 ± 5.34	9.96 ± 5.37	7.26 ± 5.15

Baseline characteristics of FHN Nocturnal Trial participants with baseline sodium concentration values								
Characteristic	**N (available data for respective parameter)**	**3X Nocturnal Pts (N=39)**	**3X Nocturnal Pts with SNa=<138 mEq/L (N=21)**	**3X Nocturnal Pts with SNa>138 mEq/L (N=18)**	**N (available data for respective parameter)**	**6X Nocturnal Pts (N=43)**	**6X Nocturnal Pts with SNa=<138 mEq/L (N=21)**	**6X Nocturnal Pts with SNa>138 mEq/L (N=22)**
time-integrated fluid load (TIFL; units liter × day)	26	2.94 ± 1.73	3.79 ± 1.40	2.41 ± 1.75	28	2.77 ± 2.22	3.34 ± 2.12	2.21 ± 2.26
BMI (kg/m2)	36	28.6 ± 7.1	25.2 ± 4.9	31.0 ± 7.6	39	30.1 ± 8.5	30.1 ± 8.5	30.1 ± 8.5
Predialysis Bicarbonate (mEq/L)	39	22.6 ± 3.5	21.6 ± 3.2	23.5 ± 3.6	43	22.8 ± 4.0	22.8 ± 4.0	22.8 ± 4.0
Diabetes (%)	39	17 (44%)	8 (44%)	9 (43%)	43	18 (42%)	18 (42%)	18 (42%)
Left Ventricular Ejection Fraction (%)	39	56.4 ± 10.4	57.1 ± 9.4	55.9 ± 11.3	43	54.9 ± 11.6	54.9 ± 11.6	54.9 ± 11.6

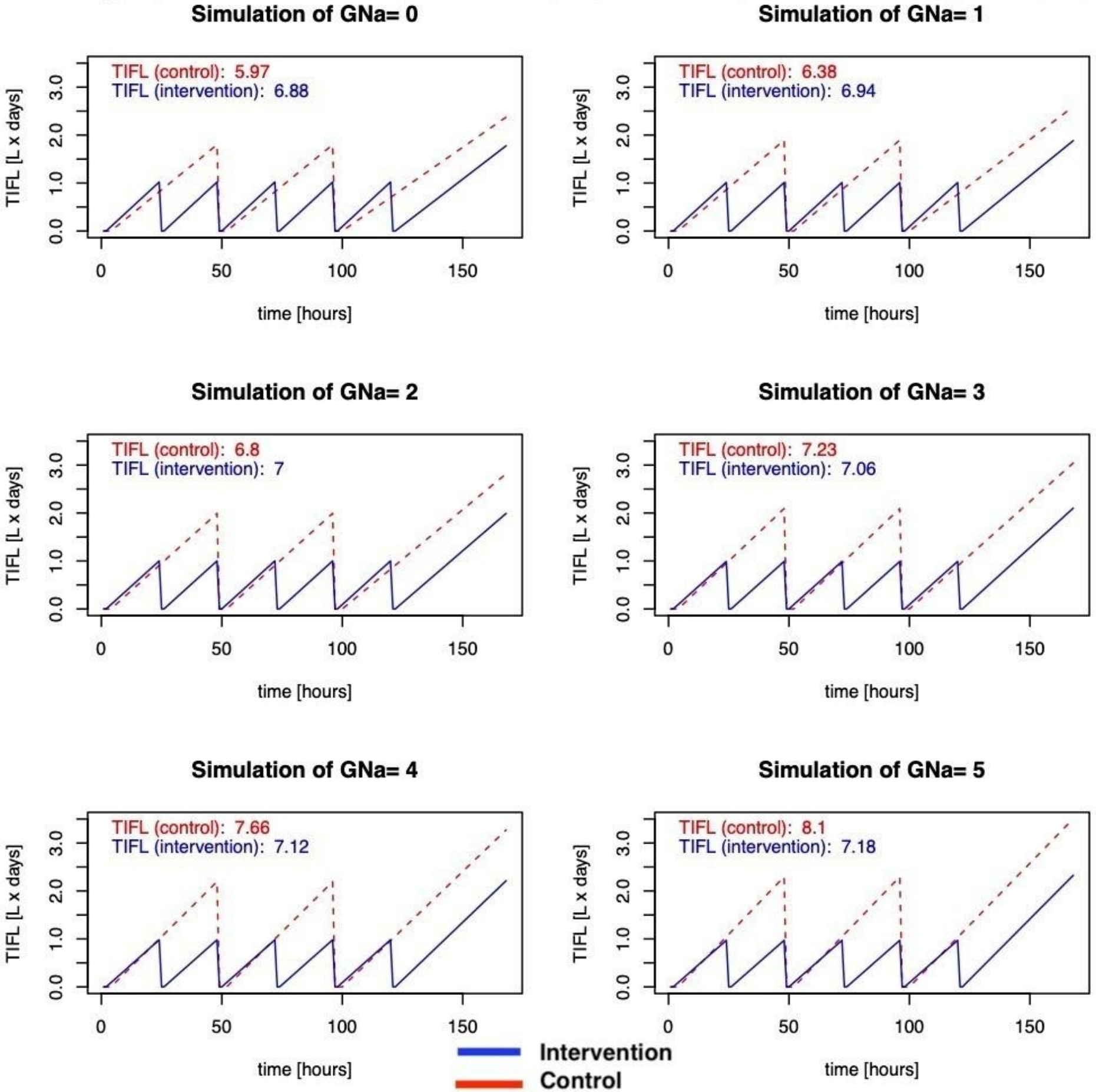
***** Plus-minus values are means ±SD. Bracketed values are medians with interquartile ranges.

Supplementary Table 3: Treatment effect of more frequent hemodialysis on left ventricular mass reduction in subgroups of parameters tested for interaction.

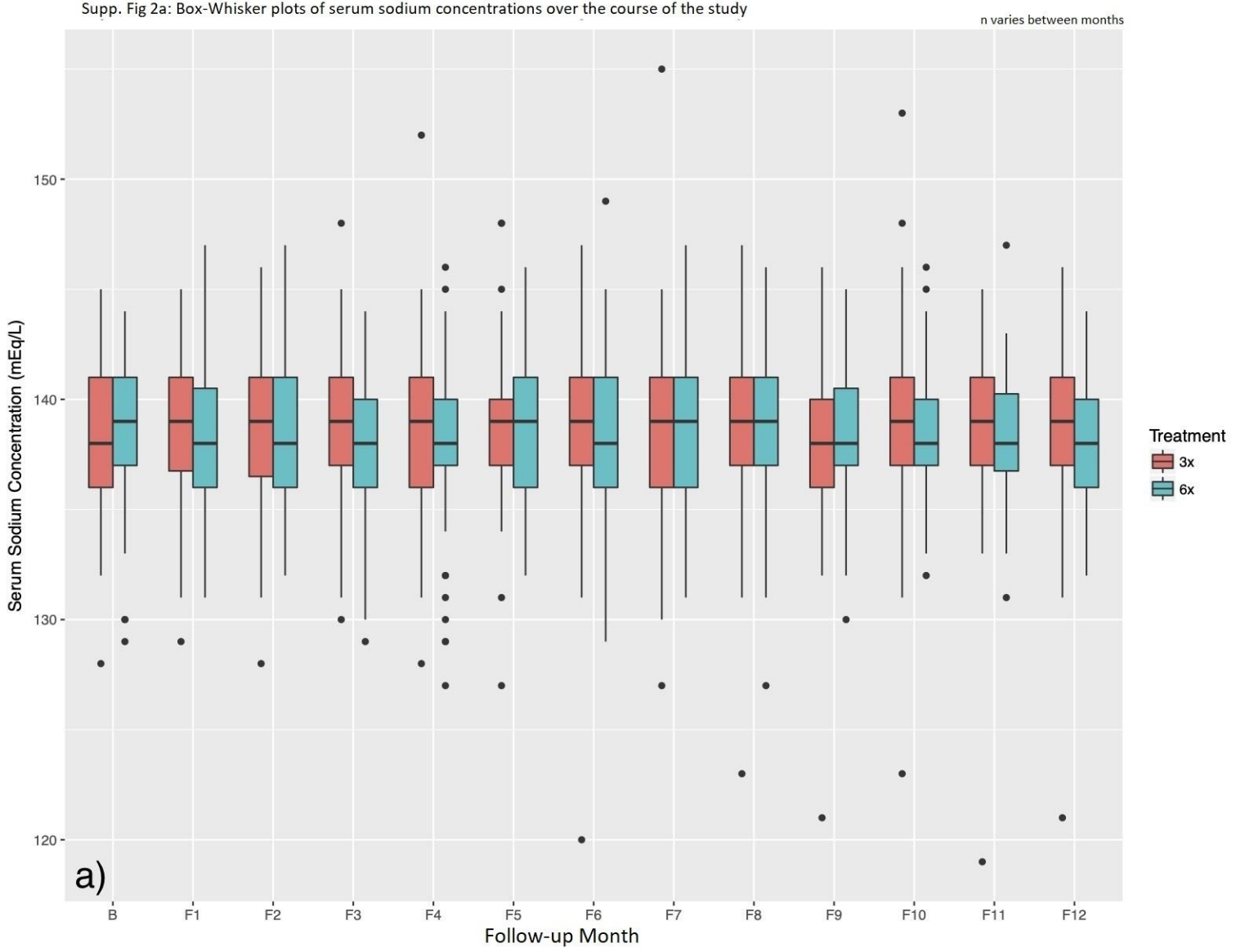
a) Nocturnal Trial Parameter	N	Group	Treatment effect (95% CI)	P
Serum Sodium Concentration (SNa+)	40	SNa+ <= 138 mEq/L	-14.7 (-32.9 to 3.5) g	
	42	SNa+ > 138 mEq/L	-7.5 (-24.8 to 9.7) g	
	82	continuous interaction	1.4 (-2.6 to 5.3) g	
Serum Sodium Gradient (GNa+)	26	GNa+ <= 0 mEq/L	7.7 (-17.5 to 32.9) g	
	36	GNa+ > 0 mEq/L	-14.5 (-35.4 to 6.5) g	
	62	continuous interaction	-2 (-6.3 to 2.3) g	
Time-integrated fluid load (TIFL)	26	TIFL <= 3 L x day	-7.5 (-28.2 to 13.3) g	
	36	TIFL > 3 L x day	-0.1 (-32.2 to 31.9) g	
	62	continuous interaction	-7.8 (-22.4 to 6.8) g	

The treatment effect of frequent in-center dialysis may differ by the relative level of certain measures. We tested this by creating interaction terms between the binary treatment variable and the continuous form of each parameter. Results reflect the change in LVM (g) associated with a per-unit parameter among the frequent as opposed to the conventional treatment arm. Each parameter was also divided into "low" and "high" value ranges, then frequent vs. conventional treatment effects were calculated within each range, just as an illustration."

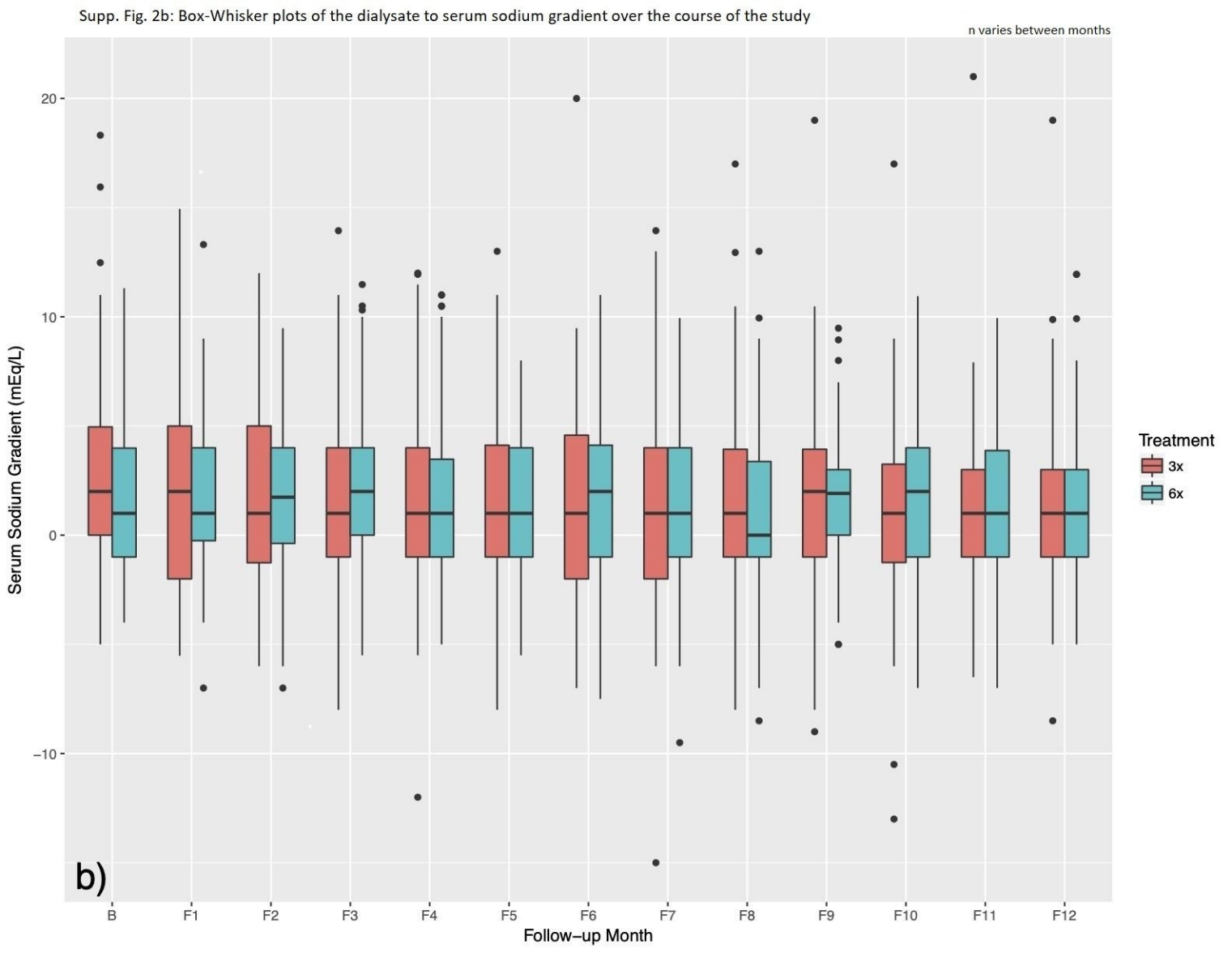
Supp. Fig. 1: Simulation of time-integrated fluid-load (TIFL) at different dialysate to serum sodium gradients (GNa)



Supp. Fig 2a: Box-Whisker plots of serum sodium concentrations over the course of the study



Supp. Fig. 2b: Box-Whisker plots of the dialysate to serum sodium gradient over the course of the study



Supp. Fig. 2c: Box-Whisker plots of the dialysate sodium concentration over the course of the study