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Supplemental Table 1. Characteristics of the participants at baseline according to country of origin

Baseline Characteristics	All subjects (n=66)	United States (n=43)	India (n=23)	p-value[1]
Age, years	56 ± 12	56 ± 12	57 ±13	0.66
Male, n (%)	46 (70)	27 (63)	19 (83)	0.16
Race, n (%)				<0.001
Asian	23 (35)	0 (0)	23 (100)	
Black	35 (53)	35 (82)	0 (0)	
White	7 (11)	7 (16)	0 (0)	
Other	1 (1)	1 (2)	0 (0)	
ESKD vintage, years	2.4 [1.2, 5.3]	3.5 [1.2, 5.7]	2.2 [1.1, 3.0]	<0.001
Vascular access, n (%)				0.001
AV fistula	46 (71)	25 (59)	21 (91)	
AV graft	16 (25)	15 (36)	1 (4)	
Catheter	3 (5)	2 (5)	1 (4)	
Comorbid conditions, n (%)				
Diabetes mellitus	28 (43)	15 (35)	13 (56)	0.01
Hyperlipidemia	40 (61)	32 (74)	8 (35)	0.003
Hypertension	56 (85)	42 (98)	14 (61)	<0.001
Ischemic heart disease	32 (48)	22 (51)	10 (44)	0.61
Congestive heart failure	17 (26)	17 (40)	0 (0)	<0.001
Arrhythmia	21 (32)	21 (49)	0 (0)	<0.001
Atrial fibrillation	7 (11)	7 (16)	0 (0)	0.09
Systolic blood pressure, mmHg	141 ± 23	140 ± 26	143 ± 18	0.57
Diastolic blood pressure, mmHg	77 ± 13	76 ± 15	79 ± 7	0.18
Medication use, n(%)				
Aspirin	30 (45)	21 (49)	9 (39)	0.60
Statin	32 (48)	20 (47)	12 (52)	0.80
ACEI or ARB	22 (33)	20 (47)	2 (9)	<0.01
Beta-blockers	36 (55)	25 (58)	11 (48)	0.45
Pre-dialysis Laboratory values				
Blood urea nitrogen, mg/dL	60 ± 18	59 ± 16	62 ± 22	0.47
Creatinine, mg/dL	10.0 ± 3.4	10.9 ± 3.5	8.3 ± 2.4	0.01
Sodium, mEq/L	137 ± 4	138 ± 4	134 ± 4	<0.001
Potassium, mEq/L	5.0 ± 1.0	4.8 ± 0.7	5.4 ± 1.3	0.07
Calcium, mg/dL	8.7 ± 0.8	8.8 ± 0.8	8.4 ± 0.8	0.08
Bicarbonate, mEq/L	22 ± 4	23.8 ± 2.9	18.8 ± 2.9	<0.001
Magnesium, mg/dL	2.4 ± 0.5	2.2 ± 0.3	2.8 ± 0.6	0.001
Phosphorus, mg/dL	5.5 ± 2.0	5.7 ± 2.1	5.0 ± 1.9	0.19
Hemoglobin, g/dL	11 ± 1	10.8 ± 1.0	10 ± 2	0.12
Serum albumin, g/dL	3.9 ± 0.3	4.0 ± 0.3	3.8 ± 0.4	0.01

Continuous variables are presented as means ± standard deviation or median [25th, 75th percentiles].
[1]p-value from analysis of variance (ANOVA) for continuous variables, or Chi-square or Fisher's Exact Tests for categorial variables, as appropriate.
Abbreviations: ESKD, end-stage kidney disease; AV, arteriovenous; ACEI, angiotensin converting enzyme inhibitor; ARB, angiotensin receptor blocker.
Percentages may not add to 100 due to rounding.

Supplemental Table 2. Characteristics of the dialysis prescription at baseline according to country of origin

Baseline Characteristics	All subjects (n=66)	United States (n=43)	India (n=23)	p-value[1]
Duration of hemodialysis, hours	4.0 [3.0, 6.0]	3.8 [3.0, 5.0]	4.0 [3.0, 6.0]	0.20
spKt/V	1.5 ± 0.4	1.5 ± 0.3	1.4 ± 0.6	0.44
Pre-dialysis weight, kg	86.7 ± 28.8	97.6 ± 28.7	66.5 ± 14.9	<0.001
Kg over dry weight target before dialysis	4.2 [-0.4, 12.0]	4.5 [0.7, 12.0]	4.1 [-0.4, 6.3]	0.07
UFR, ml/kg/h	10 ± 4	10 ± 4	10 ± 4	0.74
Dialysate Flow, mL/min	600 [500, 800]	664 [600, 800]	500 [485, 500]	<0.001
Blood Flow, mL/min	390 [324, 461]	437 [391, 491]	302 [262, 332]	<0.001
High-flux dialyzer, n (%)	42 (64)	40 (93)	2 (8.7)	<0.001
Membrane reuse, n (%)	18 (27)	10 (23)	8 (35)	0.39
Cellulose membrane, n (%)	5 (8)	0 (0)	5 (22)	<0.01
Dialysate temperature, n (%)				<0.01
35.5 Celsius	1 (2)	1 (2)	0 (0)	
36.0 Celsius	3 (5)	3 (7)	0 (0)	
36.5 Celsius	5 (8)	0 (0)	5 (22)	
37.0 Celsius	57 (86)	39 (91)	18 (78)	
Dialysate potassium, n (%)				<0.01
1.0 mEq/L	1 (2)	1 (2)	0 (0)	
2.0 mEq/L	53 (80)	30 (70)	13 (100)	
3.0 mEq/L	11 (17)	11 (26)	0 (0)	
4.0 mEq/L	1 (2)	1 (2)	0 (0)	
Dialysate calcium, n (%)				<0.001
1.5 and 1.6 mEq/L	13 (20)	0 (0)	13 (56)	
2.0 and 2.5 mEq/L	39 (59)	39 (91)	0 (0)	
3.0 and 3.5 mEq/L	14 (21)	4 (9)	10 (44)	
Dialysate sodium, n (%)				0.45
135 mEq/L	6 (10)	3 (7)	3 (17)	
138 mEq/L	6 (10)	4 (9)	2 (11)	
140 mEq/L	49 (80)	36 (84)	13 (72)	
Dialysate Bicarbonate, n (%)				<0.001
24 - 32 mEq/L	16 (24)	6 (14)	10 (43)	
33 - 36 mEq/L	34 (52)	21 (49)	13 (57)	
37 – 40 mEq/L	16 (24)	16 (37)	0 (0)	

Continuous variables are presented as means ± standard deviation or median [25th, 75th percentiles].

[1]p-value from analysis of variance (ANOVA) for continuous variables, or Chi-square or Fisher's Exact Tests for categorial variables, as appropriate.

Abbreviations: spKt/V, single-pool Kt/V; UFR, ultrafiltration rate.

Percentages may not add to 100 due to rounding.

Note: Blood flow rate is the mean of 12 timepoints during the baseline dialysis session.

Supplemental Table 3. Laboratory values by hemodialysis sessions

Pre-dialysis serum laboratory values	All Sessions n=4720	Dialysate Bicarbonate Recorded n=3655	Dialysate Bicarbonate <35 n=816	Dialysate Bicarbonate =35 n=1552	Dialysate Bicarbonate >35 n=1287	p-value
Blood urea nitrogen, mg/dL (number of sessions)	56.6 ± 17.1 (1713)	56.8±16.9 (1232)	51.2 ± 15.2 (257)	57.4 ± 18.8 (551)	59.5 ± 14.5 (424)	<0.001
Creatinine, mg/dL (number of sessions)	9.9 ± 3.3 (1713)	10.0 ± 3.3 (1232)	9.0 ± 2.3 (257)	9.5 ± 3.2 (551)	11.3 ± 3.5 (424)	<0.001
Sodium, mEq/L (number of sessions)	136.8 ± 4.3 (1713)	136.9 ± 3.9 (1232)	135.8 ± 3.8 (257)	136.4 ± 3.5 (551)	138.2 ± 4.0 (424)	<0.001
Potassium, mEq/L (number of sessions)	4.9 ± 0.8 (1704)	4.9 ± 0.8 (1225)	4.9 ± 0.8 (251)	4.8 ± 0.8 (550)	4.8 ± 0.7 (424)	0.92
Calcium, mg/dL (number of sessions)	8.7 ± 0.9 (1713)	8.7 ± 0.8 (1232)	8.6 ± 0.8 (257)	8.7 ± 0.9 (551)	8.9 ± 0.8 (424)	<0.001
Bicarbonate, mEq/L (number of sessions)	22.2 ± 4.0 (1712)	22.3 ± 4.0 (1232)	21.6 ± 4.4 (257)	20.7 ± 3.4 (551)	24.8 ± 3.0 (424)	<0.001
Magnesium, mg/dL (number of sessions)	2.4 ± 0.5 (1713)	2.4 ± 0.5 (1232)	2.3 ± 0.5 (257)	2.4 ± 0.5 (551)	2.3 ± 0.3 (424)	<0.001
Phosphorus, mg/dL (number of sessions)	5.2 ± 1.7 (1711)	5.4 ± 1.6 (1230)	4.8 ± 1.3 (255)	5.3 ± 1.7 (551)	5.7 ± 1.7 (424)	<0.001
Hemoglobin, g/dL (number of sessions)	10.6 ± 1.2 (394)	10.7 ± 1.2 (246)	10.4 ± 1.1 (58)	10.6 ± 1.1 (109)	11.3 ± 1.2 (79)	<0.001
Serum albumin, g/dL (number of sessions)	3.9 ± 0.4 (1713)	3.9 ± 0.4 (1232)	3.8 ± 0.3 (257)	3.9 ± 0.4 (551)	4.0 ± 0.3 (424)	<0.001

Data are presented as means ± standard deviation.
p-value from analysis of variance (ANOVA).
No adjustment of repeated measures within subject.

Supplemental Table 4. Characteristics of the hemodialysis prescriptions by hemodialysis sessions

Dialysis Parameters	All Sessions n=4720	Dialysate Bicarbonate Recorded n=3655	Dialysate Bicarbonate <35 n=816	Dialysate Bicarbonate =35 n=1552	Dialysate Bicarbonate >35 n=1287	p-value
Duration of hemodialysis, hours (number of sessions)	4.0 [3.5, 4.0] (3655)	4.0 [3.5, 4.0] (3655)	4.0 [4.0, 4.0] (816)	4.0 [3.5, 4.0] (1552)	4.0 [3.5, 4.0] (1287)	<0.001
spKt/V (number of sessions)	1.5 ± 0.4 (1643)	1.5 ± 0.4 (1197)	1.5 ± 0.6 (247)	1.4 ± 0.4 (536)	1.5 ± 0.3 (414)	<0.001
Pre-dialysis weight, kg (number of sessions)	89.1 ± 28.3 (3655)	89.1 ± 28.3 (3655)	73.5 ± 17.1 (816)	84.6 ± 20.5 (1552)	104.2 ± 34.2 (1287)	<0.001
kg over dry weight target before dialysis (number of sessions)	3.0 [1.8, 4.1] (3647)	3.0 [1.8, 4.1] (3647)	3.0 [1.8, 4.0] (816)	2.6 [1.5, 3.7] (1545)	3.4 [2.3, 4.7] (1286)	<0.001
UFR, mL/kg/h (number of sessions)	9.7 ± 4.6 (3641)	9.7 ± 4.6 (3641)	9.9 ± 4.5 (816)	9.0 ± 4.3 (1543)	10.4 ± 4.9 (1282)	<0.001
Dialysate Flow, mL/min (number of sessions)	600 [500, 800] (3652)	600 [500, 800] (3652)	575 [500, 800] (816)	600 [500, 600] (1549)	600 [600.0, 800.0] (1287)	<0.001
Blood Flow, mL/min (number of sessions)	393 [346, 467] (3655)	393 [346, 467] (3655)	333 [300, 467] (816)	367 [333, 400] (1552)	465.0 [400, 500] (1287)	<0.001
High-flux dialyzer, n (%)	2476 (68)	2476 (68)	410 (50)	805 (52)	126 (98)	<0.001
Membrane reuse, n (%)	1009 (27)	1009 (28)	24 (3)	733 (47)	252 (20)	<0.001
Cellulose membrane, n (%)	279 (8)	279 (8)	64 (8)	215 (14)	0 (0)	
Dialysate temperature, n (%)						<0.001
35.5 Celsius	72 (2)	72 (2)	0 (0)	0 (0)	72 (6)	
36.0 Celsius	192 (5)	192 (5)	0 (0)	73 (5)	119 (9)	
36.5 Celsius	323 (9)	323 (9)	0 (0)	323 (21)	0 (0)	
37.0 Celsius	3048 (84)	3048 (84)	803 (100)	1150 (74)	1095 (85)	
Dialysate potassium, n (%)						<0.001
1.0 mEq/L	65 (2)	65 (2)	0 (0)	1 (0)	64 (5)	
2.0 mEq/L	2916 (80)	2916 (80)	569 (72)	1342 (87)	1005 (78)	
3.0 mEq/L	645 (18)	645 (18)	223 (28)	204 (13)	218 (17)	

Dialysis Parameters	All Sessions n=4720	Dialysate Bicarbonate Recorded n=3655	Dialysate Bicarbonate <35 n=816	Dialysate Bicarbonate =35 n=1552	Dialysate Bicarbonate >35 n=1287	p-value
4.0 mEq/L	5 (0)	5 (0)	0 (0)	5 (0)	0 (0)	
Dialysate calcium, n (%)						<0.001
1.5 and 1.6 mEq/L	735 (20)	735 (20)	64 (8)	671 (43)	0 (0)	
2.0 and 2.5 mEq/L	2247 (62)	2247 (62)	410 (50)	807 (52)	1030 (80)	
3.0 and 3.5 mEq/L	672 (18)	672 (18)	342 (42)	73 (5)	257 (20)	
Dialysate sodium, n (%)						<0.001
135 mEq/L	424 (12)	424 (12)	83 (13)	239 (15)	102 (8)	
138 mEq/L	273 (8)	273 (8)	64 (10)	97 (6)	112 (9)	
140 mEq/L	2726 (79)	2726 (79)	471 (76)	1182 (76)	1073 (83)	

Continuous variables are presented as means ± standard deviation or median [25th, 75th percentiles].

p-value from analysis of variance (ANOVA) for continuous variables, or Chi-square or Fisher's Exact Tests for categorical variables, as appropriate.

Abbreviations: spKt/V, single-pool Kt/V; UFR, ultrafiltration rate.

Note: Blood flow rate is the mean of 12 timepoints during each HD session assessed.

No adjustment for repeated measures within subject.