

SUPPLEMENTARY MATERIAL

SUPPLEMENTARY FIGURE LEGEND

Supplementary Figure S1. Study algorithm for overall cohort creation.

Supplementary Figure S2. Study algorithm for subcohort of patients eligible for self-reported change in urine output (UOP) analyses (i.e., patients who underwent two or more surveys assessing UOP over time).

Supplementary Table S1. Baseline characteristics according to frequency of self-reported urine output (UOP).

	Absence of UOP	UOP every 1-3 days	UOP > 1 time/day	Presence of UOP, frequency unspecified	p¹
% (N) of patients	25.4 (170)	19.9 (133)	51.5 (345)	3.3 (22)	n/a
Age (years), Mean±SD	51.6±14.6	56.8±14.0	54.8±14.5	60.5±11.6	0.003
Female, % (N)	42.9 (73)	40.6 (54)	45.8 (158)	40.9 (9)	0.74
Race, % (N)					0.05
White	57.1 (97)	57.1 (76)	53.6 (185)	63.6 (14)	
Black	36.5 (62)	33.8 (45)	33.0 (114)	22.7 (5)	
Asian	5.3 (9)	3.8 (5)	11.3 (39)	13.6 (3)	
Pacific Islander	1.2 (2)	3.0 (4)	2.0 (7)	0.0 (0)	
Alaskan/American Indian	0.0 (0)	0.8 (1)	0.0 (0)	0.0 (0)	
Other Race	0.0 (0)	1.5 (2)	0.0 (0)	0.0 (0)	
Hispanic ethnicity, % (N)	52.9 (90)	50.4 (67)	44.9 (155)	54.6 (12)	0.31
Vintage (months), mean±SD	87.0±59.3	50.3±49.0	32.5±28.8	31.3±33.5	<0.001
Vintage, % (N)					<0.001
<1 year	2.4 (4)	18.1 (24)	30.4 (104)	31.8 (7)	
1 to <2 years	12.4 (21)	17.3 (23)	21.4 (73)	36.4 (8)	
≥2 years	85.2 (144)	64.7 (86)	48.3 (165)	31.8 (7)	
Diabetes, % (N)	48.8 (83)	52.6 (70)	56.8 (196)	59.1 (13)	0.35
Vascular access, % (N)					0.48
AVF/AVG	77.1 (131)	70.7 (94)	69.9 (241)	81.8 (18)	
Catheter	8.8 (15)	15.0 (20)	14.8 (51)	91. (2)	
Unknown	14.1 (24)	14.3 (19)	15.4 (53)	9.1 (2)	
LABORATORY TESTS					
Median (IQR)					
Serum albumin (g/dL)	4.1 (3.9, 4.3)	4.0 (3.8, 4.2)	4.0 (3.8, 4.2)	4.0 (3.9, 4.1)	0.52
Alkaline phosphatase (IU/L)	91 (74, 130)	88 (66, 112)	82 (64, 116)	110 (72, 125)	0.05
Calcium (mg/dL)	9.2 (8.7, 9.6)	9.1 (8.7, 9.5)	9.1 (8.7, 9.5)	9.0 (8.6, 9.3)	0.61

Serum creatinine (mg/dL)	10.6 (8.5, 12.7)	9.5 (7.6, 11.5)	9.4 (7.2, 11.4)	7.5 (5.5, 8.1)	<0.001
Ferritin (ng/mL)	625 (405, 820)	626 (367, 862)	639 (421, 874)	751 (372, 824)	0.89
Hemoglobin (g/dL)	10.7 (10.1, 11.4)	10.8 (10.1, 11.4)	10.6 (10.0, 11.2)	10.7 (10.4, 10.9)	0.29
Iron saturation (%)	28 (22, 36)	28 (22, 36)	28 (21, 34)	27 (22, 36)	0.85
nPCR (g/kg/day)	1.0 (0.9, 1.2)	1.0 (0.9, 1.1)	1.0 (0.8, 1.2)	1.0 (0.9, 1.3)	0.35
Phosphorus (mg/dL)	5.1 (3.9, 6.1)	4.9 (4.2, 6.1)	4.9 (4.1, 5.7)	4.9 (3.8, 6.1)	>0.99
Potassium	5.1 (4.7, 5.4)	4.9 (4.6, 5.3)	4.8 (4.4, 5.2)	4.6 (4.4, 4.8)	<0.001
PTH (pg/mL)	365 (226, 579)	307 (195, 468)	357 (229, 506)	366 (268, 420)	0.29
Single pool Kt/V	1.7 (1.5, 2.0)	1.6 (1.5, 1.8)	1.6 (1.4, 1.8)	1.7 (1.5, 2.0)	0.001
LABORATORY TESTS, N (%)					
Potassium (mEq/L)					
<3.5	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.005
3.5-5.0	49.0 (77)	64.1 (75)	64.9 (196)	88.2 (15)	
>5.0-5.5	29.9 (47)	22.2 (26)	22.8 (69)	28.6 (2)	
>5.5	21.0 (33)	13.7 (16)	12.3 (37)	0.0 (0)	
BODY ANTHROPOMETRY					
Median (IQR)					
BMI (kg/m ²)	26.6 (23.0, 30.2)	26.4 (23.5, 31.1)	26.7 (23.1, 32.2)	25.8 (24.5, 27.7)	0.79

Abbrev.: AVF, arteriovenous fistula; AVG, arteriovenous graft; nPCR, normalized protein catabolic rate; PTH, parathyroid hormone; BMI, body mass index.

¹P-values calculated by ANOVA, chi-square, or Kruskal Wallis tests.

Supplementary Table S2. Association between self-reported presence vs. absence of urine output (UOP) and all-cause mortality risk.

	BASELINE											
	Unadjusted		Case-mix ¹		Expanded case-mix ²		Expanded case-mix+ adequacy ³		Expanded case-mix+ vascular access ⁴		Expanded case-mix+ center ⁵	
	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P
Absent UOP	1.45 (1.01, 2.08)	0.04	1.86 (1.28, 2.70)	0.001	1.78 (1.16, 2.72)	0.008	1.84 (1.20, 2.83)	0.006	1.81 (1.18, 2.77)	0.007	1.68 (1.09, 2.59)	0.02
Present UOP	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a
	TIME-VARYING											
	Unadjusted		Case-mix ¹		Expanded case-mix ²		Expanded case-mix+ adequacy ³		Expanded case-mix+ vascular access ⁴		Expanded case-mix+ center ⁵	
	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P
Absent UOP	1.65 (1.16, 2.33)	0.005	2.05 (1.43, 2.93)	<0.001	2.01 (1.35, 2.99)	<0.001	2.04 (1.36, 3.04)	<0.001	2.02 (1.36, 3.01)	<0.001	1.87 (1.24, 2.80)	0.003
Present UOP	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a

¹Case-mix is adjusted for age, sex, race, ethnicity, and diabetes.

²Expanded case-mix is adjusted for age, sex, race, ethnicity, diabetes, and vintage.

³Expanded case-mix+adequacy is adjusted for age, sex, race, ethnicity, diabetes, vintage, and single-pool Kt/V.

⁴Expanded case-mix+vascular access is adjusted for age, sex, race, ethnicity, diabetes, vintage, and vascular access.

⁵Expanded case-mix+center is adjusted for age, sex, race, ethnicity, diabetes, vintage, and dialysis center.

Supplementary Table S3. Association between self-reported frequency of urine output (UOP) and all-cause mortality risk.

	BASELINE											
	Unadjusted		Case-mix ¹		Expanded case-mix ²		Expanded case-mix+ adequacy ³		Expanded case-mix+ vascular access ⁴		Expanded case-mix+ center ⁵	
	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P
Absence of UOP	1.61 (1.09, 2.39)	0.02	2.03 (1.36, 3.05)	<0.001	1.97 (1.24, 3.12)	0.004	2.02 (1.27, 3.21)	0.003	2.00 (1.26, 3.17)	0.003	1.81 (1.14, 2.90)	0.01
UOP Every 1-3 days	1.33 (0.84, 2.09)	0.22	1.30 (0.83, 2.05)	0.25	1.29 (0.82, 2.05)	0.27	1.27 (0.80, 2.01)	0.31	1.27 (0.80, 2.01)	0.30	1.21 (0.75, 1.93)	0.43
UOP > 1 time/day	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a
Presence of UOP, frequency non-specified	1.66 (0.66, 4.14)	0.28	1.43 (0.57, 3.59)	0.45	1.43 (0.57, 3.60)	0.45	1.46 (0.58, 3.67)	0.42	1.47 (0.58, 3.70)	0.42	1.50 (0.58, 3.90)	0.40
	TIME-VARYING											
	Unadjusted		Case-mix ¹		Expanded case-mix ²		Expanded case-mix+ adequacy ³		Expanded case-mix+ vascular access ⁴		Expanded case-mix+ center ⁵	
	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P
Absence of UOP	1.83 (1.24, 2.70)	0.002	2.35 (1.57, 3.51)	<0.001	2.33 (1.50, 3.63)	<0.001	2.35 (1.51, 3.66)	<0.001	2.35 (1.51, 3.65)	<0.001	2.11 (1.34, 3.32)	0.001
UOP Every 1-3 days	1.33 (0.83, 2.11)	0.23	1.45 (0.91, 2.31)	0.12	1.45 (0.90, 2.31)	0.12	1.42 (0.89, 2.27)	0.14	1.43 (0.90, 2.29)	0.13	1.31 (0.81, 2.10)	0.27
UOP > 1 time/day	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a
Presence of UOP, frequency non-specified	1.48 (0.53, 4.10)	0.45	1.59 (0.57, 4.42)	0.37	1.59 (0.57, 4.43)	0.37	1.66 (0.60, 4.62)	0.33	1.66 (0.60, 4.60)	0.33	1.57 (0.55, 4.43)	0.40

¹Case-mix is adjusted for age, sex, race, ethnicity, and diabetes.

²Expanded case-mix is adjusted for age, sex, race, ethnicity, diabetes, and vintage.

³Expanded case-mix+adequacy is adjusted for age, sex, race, ethnicity, diabetes, vintage, and single-pool Kt/V.

⁴Expanded case-mix+vascular access is adjusted for age, sex, race, ethnicity, diabetes, vintage, and vascular access.

⁵Expanded case-mix+center is adjusted for age, sex, race, ethnicity, diabetes, vintage, and dialysis center.

Supplementary Table S4. Associations of self-reported baseline absence of urine output (UOP) with all-cause mortality risk across clinically relevant subgroups (ref: presence of UOP).

	Unadjusted		Case-mix ¹		Expanded case-mix ²	
SUBGROUPS	Absence of UOP	p-interaction	Absence of UOP	p-interaction	Absence of UOP	p-interaction
Age		0.40		0.26		0.26
<60 years old	1.42 (0.81, 2.50)		1.51 (0.85, 2.68)		1.46 (0.76, 2.78)	
≥60 years old	1.95 (1.22, 3.11)		2.37 (1.43, 3.95)		2.22 (1.22, 4.02)	
Gender		0.84		0.82		0.79
Female	1.52 (0.89, 2.60)		1.72 (0.99, 3.01)		1.93 (0.98, 3.81)	
Male	1.40 (0.86, 2.28)		2.00 (1.19, 3.34)		1.83 (1.05, 3.21)	
Race (White)		0.91		0.48		0.48
White	1.46 (0.87, 2.45)		2.26 (1.30, 3.93)		1.84 (1.01, 3.35)	
Non-White	1.50 (0.90, 2.47)		1.56 (0.93, 2.62)		1.80 (1.01, 3.20)	
Race (Black)		0.87		0.32		0.33
Black	1.38 (0.80, 2.36)		1.48 (0.86, 2.55)		1.97 (1.09, 3.56)	
Non-Black	1.48 (0.91, 2.40)		2.28 (1.35, 3.84)		1.78 (1.02, 3.11)	
Hispanic ethnicity		0.98		0.85		0.85
Hispanic	1.53 (0.87, 2.71)		2.12 (1.17, 3.85)		1.66 (0.87, 3.17)	
Non-Hispanic	1.50 (0.94, 2.40)		1.68 (1.03, 2.73)		1.94 (1.13, 3.32)	
Vintage		0.90		0.63		0.59
<1 year	1.49 (0.20-11.1)		5.36 (0.57-50.0)		5.29 (0.57-49.4)	
≥1 year	1.35 (0.92-1.98)		1.76 (1.18-2.61)		1.67 (1.08-2.58)	
Vintage		0.50		0.57		0.53
<2 years	0.95 (0.34, 2.67)		1.21 (0.41, 3.57)		1.55 (0.50, 4.76)	
≥2 years	1.37 (0.91, 2.07)		1.85 (1.21, 2.85)		1.89 (1.17, 3.04)	
Diabetes		0.40		0.29		0.31
Diabetes	1.29 (0.80, 2.09)		1.52 (0.93, 2.50)		1.29 (0.72, 2.31)	
Non-Diabetes	1.77 (1.02, 3.08)		2.46 (1.37, 4.42)		2.71 (1.38, 5.32)	
Serum Creatinine		0.17		0.06		0.06
<9 mg/dL	2.17 (1.30-3.63)		3.33 (1.87-5.92)		2.80 (1.40-5.59)	
≥9 mg/dL	1.28 (0.74-2.21)		1.37 (0.79-2.38)		1.41 (0.76-2.62)	
Serum Albumin		0.25		0.25		0.24
<4 g/dL	2.02 (1.23, 3.32)		2.34 (1.39, 3.93)		2.42 (1.31, 4.49)	
≥4 g/dL	1.31 (0.75, 2.29)		1.68 (0.95, 2.97)		1.49 (0.79, 2.81)	
nPCR		0.12		0.35		0.36

<1 g/kg/day	1.97 (1.21, 3.19)		2.15 (1.29, 3.59)		2.14 (1.18, 3.86)	
≥1 g/kg/day	1.08 (0.61, 1.92)		1.46 (0.80, 2.67)		1.41 (0.72, 2.75)	
BMI		0.38		0.28		0.28
<30 kg/m ²	1.64 (1.08, 2.49)		2.13 (1.38, 3.28)		1.84 (1.13, 2.99)	
≥30 kg/m ²	1.10 (0.49, 2.47)		1.31 (0.57, 2.98)		2.30 (0.91, 5.85)	

Abbrev.: *eGFR*, estimated glomerular filtration rate; *nPCR*, normalized protein catabolic rate; *PTH*, parathyroid hormone; *BMI*, body mass index.

¹Case-mix is adjusted for age, sex, race, ethnicity, and diabetes.

²Expanded case-mix is adjusted for age, sex, race, ethnicity, diabetes, and vintage.

Supplementary Table S5. Associations of self-reported time-varying absence of urine output (UOP) with all-cause mortality risk across clinically relevant subgroups (ref: presence of UOP).

SUBGROUPS	Unadjusted		Case-mix ¹		Expanded case-mix ²	
	Absence of UOP	p-interaction	Absence of UOP	p-interaction	Absence of UOP	p-interaction
Age		0.85		0.59		0.58
<60 years old	1.79 (1.04, 3.10)		1.88 (1.08, 3.28)		1.93 (1.04, 3.60)	
≥60 years old	1.89 (1.20, 2.98)		2.24 (1.38, 3.64)		2.06 (1.19, 3.58)	
Gender		0.52		0.26		0.25
Female	1.44 (0.85, 2.46)		1.59 (0.91, 2.76)		1.63 (0.86, 3.09)	
Male	1.82 (1.15, 2.89)		2.53 (1.56, 4.10)		2.46 (1.46, 4.17)	
Race (White)		0.46		0.21		0.20
White	1.93 (1.17, 3.17)		2.70 (1.59, 4.57)		2.31 (1.32, 4.06)	
Non-White	1.45 (0.88, 2.37)		1.53 (0.92, 2.55)		1.73 (0.99, 3.01)	
Race (Black)		0.35		0.13		0.13
Black	1.33 (0.78, 2.26)		1.43 (0.83, 2.45)		1.80 (1.01, 3.22)	
Non-Black	1.91 (1.20, 3.02)		2.68 (1.64, 4.37)		2.21 (1.31, 3.72)	
Hispanic ethnicity		0.61		0.74		0.74
Hispanic	1.90 (1.09, 3.32)		2.20 (1.24, 3.88)		1.79 (0.98, 3.27)	
Non-Hispanic	1.58 (1.00, 2.47)		1.81 (1.13, 2.90)		2.07 (1.25, 3.45)	
Vintage		0.51		0.17		0.15
<1 year	2.35 (0.66-8.30)		8.81 (1.99-39.0)		8.82 (1.95-39.8)	
≥1 year	1.51 (1.04-2.19)		1.88 (1.28-2.76)		1.80 (1.19-2.73)	
Vintage		0.87		0.73		0.78
<2 years	1.60 (0.71, 3.64)		2.12 (0.89, 5.05)		2.61 (1.07, 6.39)	
≥2 years	1.46 (0.97, 2.20)		1.87 (1.23, 2.85)		1.87 (1.19, 2.94)	
Diabetes		0.93		0.76		0.78
Diabetes	1.66 (1.05, 2.60)		1.90 (1.20, 3.02)		1.74 (1.04, 2.91)	
Non-Diabetes	1.76 (1.02, 3.05)		2.36 (1.32, 4.21)		2.57 (1.34, 4.95)	
Serum Creatinine		0.36		0.21		0.21
<9 mg/dL	2.20 (1.33-3.61)		3.08 (1.78-5.34)		2.51 (1.33-4.73)	
≥9 mg/dL	1.53 (0.90-2.60)		1.72 (1.01-2.93)		1.90 (1.06-3.40)	
Serum Albumin		0.80		0.61		0.60
<4 g/dL	1.88 (1.16, 3.07)		2.24 (1.34, 3.72)		2.19 (1.24, 3.89)	
≥4 g/dL	1.72 (1.01, 2.94)		2.09 (1.21, 3.60)		1.97 (1.08, 3.59)	
nPCR		0.38		0.58		0.57

<1 g/kg/day	2.03 (1.25, 3.27)		2.31 (1.41, 3.81)		2.26 (1.30, 3.93)	
≥1 g/kg/day	1.46 (0.86, 2.50)		1.90 (1.09, 3.31)		2.00 (1.06, 3.75)	
BMI		0.37		0.20		0.20
<30 kg/m ²	1.89 (1.26, 2.84)		2.46 (1.61, 3.76)		2.22 (1.39, 3.53)	
≥30 kg/m ²	1.28 (0.60, 2.71)		1.40 (0.65, 2.98)		2.18 (0.94, 5.05)	

Abbrev.: *eGFR*, estimated glomerular filtration rate; *nPCR*, normalized protein catabolic rate; *PTH*, parathyroid hormone; *BMI*, body mass index.

¹Case-mix is adjusted for age, sex, race, ethnicity, and diabetes.

²Expanded case-mix is adjusted for age, sex, race, ethnicity, diabetes, and vintage.

Supplementary Table S6. Baseline characteristics according to self-reported change in urine output (UOP) over time.

	Persistent Presence of UOP	Gain in UOP	Loss of UOP	Persistent Absence of UOP	p ¹
% (N) of patients	67.5 (291)	3.5 (15)	5.1 (22)	23.9 (103)	n/a
Age (years), mean ± SD	55.8±15.0	50.4±11.4	57.9±11.7	51.9±14.6	0.05
Female, % (N)	45.0 (131)	46.7 (7)	40.9 (9)	47.6 (49)	0.94
Race, % (N)					0.34
White	53.6 (156)	33.3 (5)	45.5 (10)	62.1 (64)	
Black	33.3 (97)	66.7 (10)	45.5 (10)	30.1 (31)	
Asian	10.0 (29)	0.0 (0)	9.1 (2)	6.8 (7)	
Pacific Islander	2.8 (8)	0.0 (0)	0.0 (0)	1.0 (1)	
Alaskan/American Indian	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	
Other Race	0.3 (1)	0.0 (0)	0.0 (0)	0.0 (0)	
Hispanic ethnicity, % (N)	47.8 (139)	40.0 (6)	40.9 (9)	59.2 (61)	
Vintage (months) Mean ± SD	36.7±35.5	55.9±43.9	77.4±45.3	98.1±60.6	<0.001
Vintage, % (N)					<0.001
<1 year	23.0 (67)	6.7 (1)	9.1 (2)	1.0 (1)	
1 to <2 years	22.3 (65)	26.7 (4)	4.6 (1)	11.7 (12)	
≥2 years	54.6 (159)	66.7 (10)	86.4 (19)	87.4 (90)	
Diabetes, % (N)	55.7 (162)	66.7 (10)	68.2 (15)	44.7 (46)	0.08
Vascular access, % (N)					0.27
AVF/AVG	69.1 (201)	86.7 (13)	63.6 (14)	77.7 (80)	
Catheter	13.4 (39)	0.0 (0)	22.7 (5)	7.8 (8)	
Unknown	17.5 (51)	13.3 (2)	13.6 (3)	14.6 (15)	
LABORATORY TESTS					
Median (IQR)					
Serum albumin (g/dL)	4.0 (3.9, 4.3)	4.2 (4.0, 4.3)	4.1 (3.8, 4.3)	4.1 (3.9, 4.3)	0.58
Alkaline phosphatase (IU/L)	84 (64, 118)	84 (55, 88)	103 (77, 138)	94 (76, 137)	0.008
Calcium (mg/dL)	9.1 (8.7, 9.5)	9.3 (9.0, 9.8)	9.0 (8.7, 9.6)	9.2 (8.8, 9.6)	0.65
Serum creatinine (mg/dL)	9.4 (7.3, 11.4)	11.2 (9.3, 12.7)	10.3 (8.2, 11.6)	10.6 (8.7, 12.9)	<0.001
Ferritin (ng/mL)	682 (451, 908)	574 (393, 770)	712 (465, 1043)	643 (405, 866)	0.29
Hemoglobin (g/dL)	10.6 (10.0, 11.1)	10.8 (10.5, 10.9)	10.6 (10.3, 11.4)	10.7 (10.2, 11.4)	0.35
Iron saturation (%)	28 (21, 35)	24 (18, 28)	30 (26, 36)	30 (23, 37)	0.18
nPCR (g/kg/day)	1.0 (0.9, 1.2)	0.9 (0.8, 1.1)	1.0 (0.9, 1.2)	1.1 (0.9, 1.3)	0.16
Phosphorus (mg/dL)	4.9 (4.1, 5.9)	4.4 (3.8, 6.7)	4.4 (3.6, 6.1)	5.2 (4.0, 6.2)	0.55
Potassium (mEq/L)	4.9 (4.4, 5.2)	5.2 (4.6, 5.7)	4.7 (4.4, 5.1)	5.1 (4.7, 5.5)	0.008
PTH (pg/mL)	352 (247, 508)	345 (238, 587)	232 (155, 449)	380 (227, 608)	0.22
Single pool Kt/V	1.7 (1.5, 1.9)	1.7 (1.6, 1.8)	1.8 (1.6, 1.9)	1.8 (1.6, 2.1)	0.01
LABORATORY TESTS, % (N)					
Potassium (mEq/L)					0.02
<3.5	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	
3.5-5.0	64.6 (173)	42.9 (6)	70.0 (14)	48.0 (48)	
>5.0-5.5	23.1 (62)	21.4(3)	25.0 (5)	30.0 (30)	

>5.5	12.3 (33)	35.7 (5)	5.0 (1)	22.0 (22)	
BODY ANTHROPOMETRY					
Median (IQR)					
BMI (kg/m ²)	26.5 (23.4, 31.5)	26.7 (23.7, 29.5)	26.2 (22.1, 30.0)	26.6 (23.1, 32.1)	0.99

Abbrev.: AVF, arteriovenous fistula; AVG, arteriovenous graft; nPCR, normalized protein catabolic rate; PTH, parathyroid hormone; BMI, body mass index.

¹P-values calculated by ANOVA, chi-square, or Kruskal Wallis tests.

Supplementary Table S7. Association between change in self-reported urine output (UOP) and all-cause mortality risk.

	BASELINE											
	Unadjusted		Case-mix ¹		Expanded case-mix ²		Expanded case-mix+ adequacy ³		Expanded case-mix+ vascular access ⁴		Expanded case-mix+ center ⁵	
	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P	HR (95%CI)	P
Persistent presence of UOP	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a	1 (ref)	n/a
Gain in UOP	0.73 (0.18, 2.99)	0.66	0.92 (0.22, 3.87)	0.91	0.93 (0.22, 3.97)	0.92	0.93 (0.22, 3.98)	0.92	0.98 (0.23, 4.22)	0.98	0.92 (0.21, 4.01)	0.92
Loss of UOP	1.40 (0.56, 3.50)	0.47	1.41 (0.56, 3.57)	0.47	1.43 (0.55, 3.67)	0.46	1.44 (0.56, 3.71)	0.45	1.27 (0.49, 3.33)	0.63	1.23 (0.47, 3.24)	0.67
Persistent absence of UOP	1.28 (0.79, 2.08)	0.32	1.72 (1.04, 2.84)	0.04	1.74 (0.96, 3.18)	0.07	1.75 (0.96, 3.20)	0.07	1.74 (0.95, 3.18)	0.07	1.69 (0.91, 3.16)	0.10

¹Case-mix is adjusted for age, sex, race, ethnicity, and diabetes.

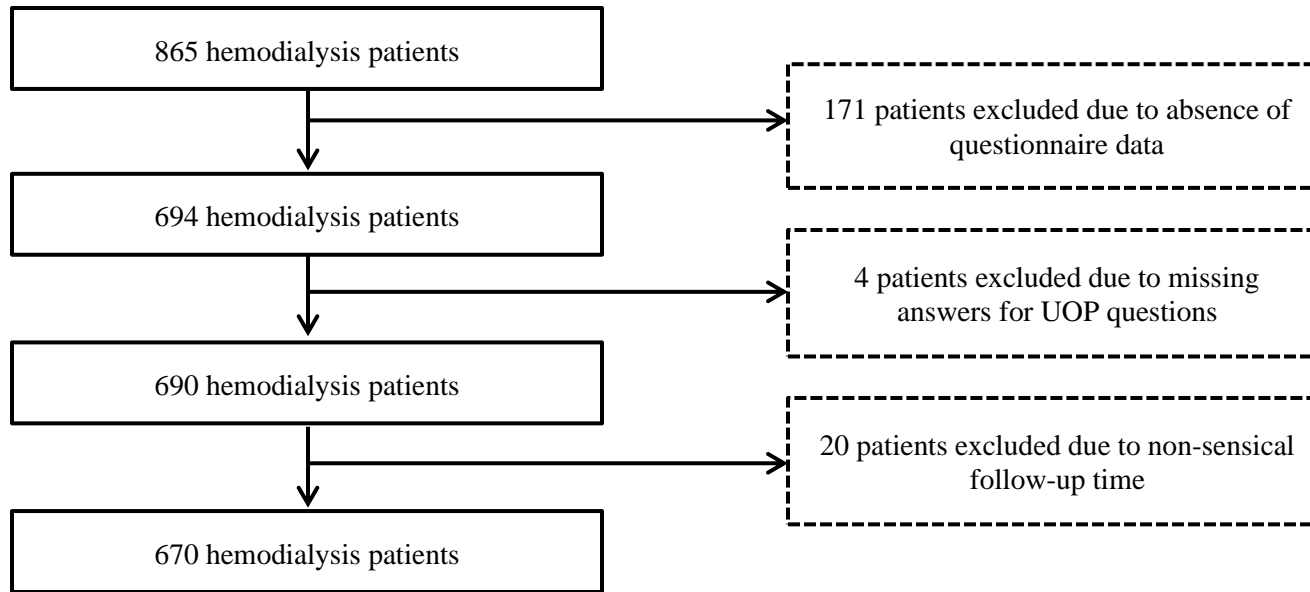
²Expanded case-mix is adjusted for age, sex, race, ethnicity, diabetes, and vintage.

³Expanded case-mix+adequacy is adjusted for age, sex, race, ethnicity, diabetes, vintage, and single-pool Kt/V.

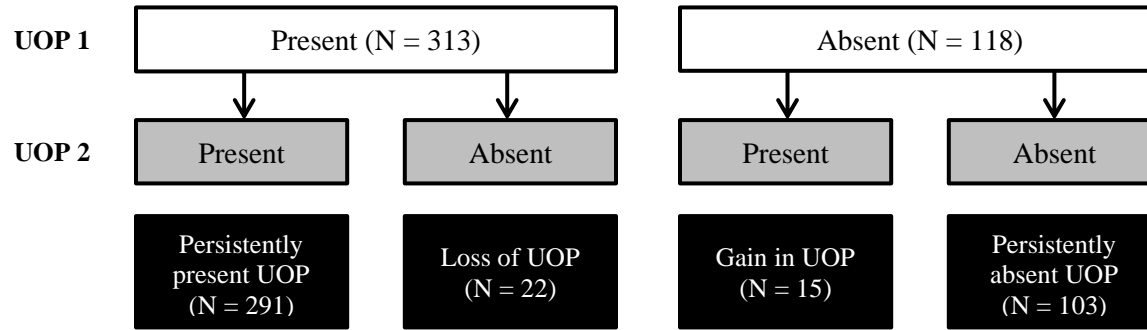
⁴Expanded case-mix+vascular access is adjusted for age, sex, race, ethnicity, diabetes, vintage, and vascular access.

⁵Expanded case-mix+center is adjusted for age, sex, race, ethnicity, diabetes, vintage, and dialysis center.

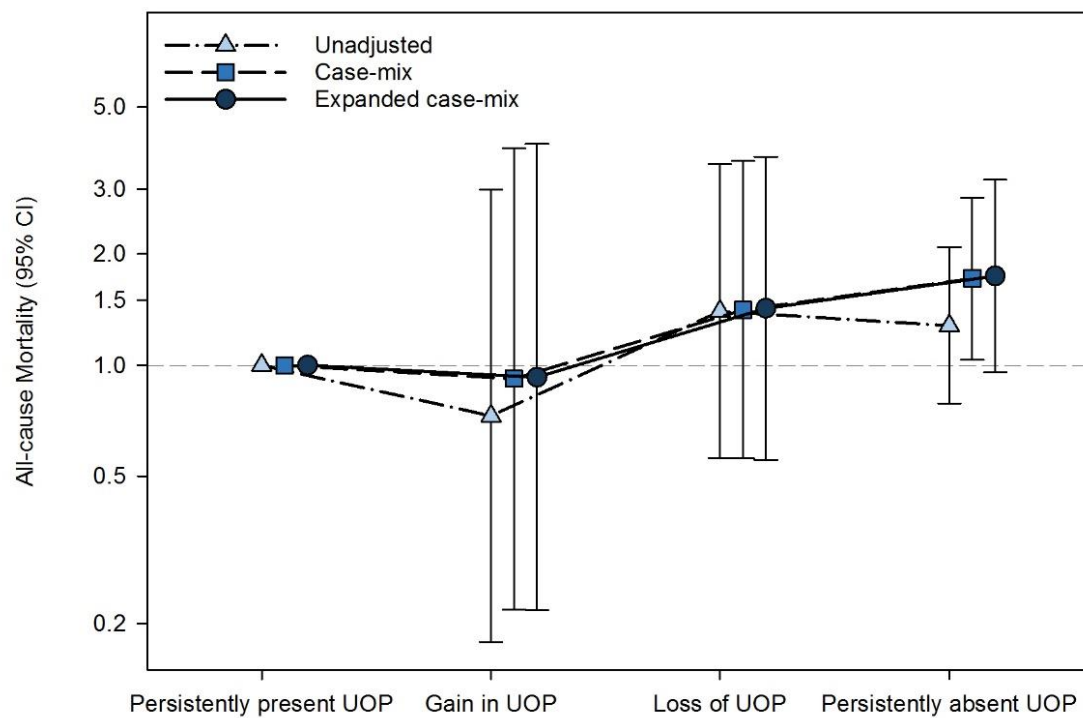
Supplementary Figure S1. Study algorithm for overall cohort creation.



Supplementary Figure S2. Study algorithm for subcohort of patients eligible for self-reported change in urine output (UOP) analyses (i.e., patients who underwent two or more surveys assessing UOP over time).



Supplementary Figure S3. Association between change in self-reported urine output (UOP) and all-cause mortality risk.



STROBE Statement—Checklist of items that should be included in reports of *cohort studies*

	Item No	Recommendation	Page No
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract	1, 3
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	3
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	5-6
Objectives	3	State specific objectives, including any prespecified hypotheses	5-6
Methods			
Study design	4	Present key elements of study design early in the paper	6
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	6-7
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up	6-7
		(b) For matched studies, give matching criteria and number of exposed and unexposed	N/A
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	6-9
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	6-9
Bias	9	Describe any efforts to address potential sources of bias	6-9
Study size	10	Explain how the study size was arrived at	6
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	6-9
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	7-9
		(b) Describe any methods used to examine subgroups and interactions	8-9
		(c) Explain how missing data were addressed	9
		(d) If applicable, explain how loss to follow-up was addressed	7-9
		(e) Describe any sensitivity analyses	7-9
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	6, 9
		(b) Give reasons for non-participation at each stage	6
		(c) Consider use of a flow diagram	Supp Fig 1
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	9, Table 1
		(b) Indicate number of participants with missing data for each variable of interest	9
		(c) Summarise follow-up time (eg, average and total amount)	11
Outcome data	15*	Report numbers of outcome events or summary measures over time	11

Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	9-13 9-13 N/A
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	12-13
Discussion			
Key results	18	Summarise key results with reference to study objectives	13-14
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	17-18
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	13-19
Generalisability	21	Discuss the generalisability (external validity) of the study results	17-18
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	2

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at <http://www.strobe-statement.org>.