Appendix

Table A1. Frequency of dialysis initiation and death during follow-up, by index age and estimated glomerular filtration rate (eGFR)

Index age group (years)	Index eGFR (ml/min/1.73m^2)	Total N	Dialysis initiation during follow-up		Death during follow up	
			N (%)		N (%)	
<65	<15	2,494	824	33.0%	903	36.2%
	15-<20	2,256	649	28.8%	858	38.0%
	20-<25	6,115	928	15.2%	1,705	27.9%
	≥25	8,284	1,692	20.4%	2,534	30.6%
65-74	<15	1,260	468	37.1%	716	56.8%
	15-<20	1,954	434	22.2%	962	49.2%
	20-<25	3,971	652	16.4%	1,788	45.0%
	≥25	7,654	1,109	14.5%	3,461	45.2%
75-84	<15	1,679	560	33.4%	1,261	75.1%
	15-<20	3,376	603	17.9%	2,099	62.2%
	20-<25	5,762	791	13.7%	3,809	66.1%
	≥25	16,195	1,357	8.4%	9,381	57.9%
≥85	<15	759	131	17.3%	587	77.3%
	15-<20	1,395	114	8.2%	934	67.0%
	20-<25	2,884	154	5.3%	2,127	73.8%
	≥25	7,311	268	3.7%	4,815	65.9%

Table A2. Characteristics of patients who started dialysis, stratified by availability of estimated glomerular filtration rate within 30 days of dialysis initiation

Patient characteristics	eGFR not missing at dialysis (n=7,989)	eGFR missing at dialysis (n=2,753)	p-value
Age at Dialysis (years)	69.9 +/- 11.80	76.0 +/- 10.24	<.0001
Male, %	98	98	0.3549
Race, %			
Black	26	16	<.0001
White	62	68	
Other	9	8	
Married, %	57	64	<.0001
Distance to closest VA facility (miles)	45.2 +/- 44.52	53.9 +/- 49.79	<.0001
High complexity VA, %	77	72	<.0001
Co-payment for VA services, %	78	84	<.0001
Zipcode median income, %			0.0003
≤$35,000	21	17	
$35,001-$42,000	19	20	
$42,001-$50,000	20	21	
$50,001-$62,000	19	19	
≥$62,001	18	20	
Residence, %			0.1916
Urban	83	81	
Large City	7	7	
Rural	7	7	
Comorbidities			
Diabetes mellitus, %	58	61	0.0007
Ischemic heart disease, %	38	54	<.0001
Heart failure, %	25	36	<.0001
Peripheral arterial disease, %	16	23	<.0001
Cerebrovascular disease, %	12	16	<.0001
Paralysis, %	1	1	0.0454
Chronic pulmonary disease, %	17	26	<.0001
Chronic liver disease , %	5	3	0.0008

Connective tissue disease, %	2	2	0.5696
Peptic ulcer disease, %	2	3	0.0014
Malignancy, %	14	17	<.0001
Metastatic solid tumor, %	0	1	<.0001
AIDS, %	1	1	0.0357
Dementia, %	2	3	0.0031
Depression, %	16	13	0.0001
Index estimated GFR (in ml/min/1.73m^2)	21.2 +/- 6.94	23.1 +/- 5.60	<.0001

Abbreviations: VA – Veterans Affairs, GFR –glomerular filtration rate, AIDS – acquired immune deficiency syndrome
Note – 4% of patients were missing information on race, 0.7% were missing facility complexity, 0.4% were missing co-payment, 4% were missing residence, and 2% were missing zipcode median income.

Table A3. Adjusted mortality hazard ratios (and 95% confidence intervals) for patients who initiated dialysis compared to patients who received medical management, stratified by time-varying age and estimated glomerular filtration rate (eGFR) in a modified LOCF analysis, in a multiple imputation analysis, and in analysis excluding dialysis for AKI.

Estimated GFR (in ml/min/1.73m^2)	Age group (years)			
	<65	65 to 74	75 to 84	≥85
Modified LOCF				
<6	0.28 (0.16, 0.47)	0.39 (0.24, 0.63)	0.34 (0.20, 0.57)	0.33 (0.19, 0.57)
6 to <9	0.40 (0.31, 0.52)	0.86 (0.63, 1.16)	0.37 (0.30, 0.46)	0.41 (0.32, 0.53)
9 to <12	0.83 (0.68, 1.02)	0.88 (0.69, 1.11)	0.75 (0.63, 0.89)	0.60 (0.49, 0.75)
12 to <15	0.85 (0.68, 1.07)	1.46 (1.16, 1.84)	1.14 (1.00, 1.30)	1.01 (0.80, 1.27)
15 to <29	1.52 (1.35, 1.72)	1.81 (1.61, 2.03)	1.89 (1.75, 2.04)	2.09 (1.81, 2.42)
≥29	3.84 (3.08, 4.77)	3.95 (3.13, 4.98)	3.37 (2.84, 3.99)	3.33 (2.42, 4.59)
Multiple imputation				
<6	0.32 (0.19, 0.52)	0.35 (0.21, 0.56)	0.40 (0.25, 0.64)	0.44 (0.27, 0.72)
6 to <9	0.47 (0.37, 0.60)	0.98 (0.73, 1.31)	0.42 (0.34, 0.51)	0.44 (0.34, 0.56)
9 to <12	0.97 (0.79, 1.18)	1.03 (0.81, 1.30)	0.92 (0.77, 1.11)	0.64 (0.51, 0.81)
12 to <15	1.05 (0.82, 1.33)	2.03 (1.60, 2.57)	1.51 (1.29, 1.76)	1.09 (0.83, 1.43)
15 to <29	3.03 (2.57, 3.58)	3.89 (3.27, 4.62)	4.31 (3.70, 5.03)	3.12 (2.44, 3.99)
≥29	4.59 (3.50, 6.03)	5.50 (3.42, 8.85)	4.57 (3.19, 6.54)	6.14 (3.22, 11.70)
Excluding AKI				
<6	0.26 (0.15, 0.43)	0.32 (0.19, 0.54)	0.31 (0.18, 0.51)	0.32 (0.18, 0.55)
6 to <9	0.36 (0.29, 0.46)	0.78 (0.57, 1.07)	0.32 (0.27, 0.40)	0.35 (0.28, 0.45)
9 to <12	0.64 (0.51, 0.80)	0.76 (0.60, 0.96)	0.66 (0.55, 0.78)	0.49 (0.39, 0.61)
12 to <15	0.68 (0.54, 0.86)	1.20 (0.95, 1.52)	1.02 (0.89, 1.17)	0.86 (0.68, 1.09)
15 to <29	1.05 (0.91, 1.21)	1.17 (1.04, 1.33)	1.12 (1.01, 1.25)	1.39 (1.19, 1.64)
≥29	1.92 (1.37, 2.68)	1.88 (1.33, 2.66)	1.19 (0.89, 1.57)	1.49 (0.80, 2.79)

Abbreviations: eGFR – estimated glomerular filtration rate, LOCF – last observation carried forward, AKI – acute kidney injury.

Models include main effects for age, eGFR, dialysis and interactions between age x eGFR, age x dialysis and eGFR x dialysis, in addition to index eGFR, eGFR slope, sex, race, marital status, zipcode median income, distance to VA facility, VA facility complexity, VA co-payment, residence, chronic conditions (diabetes, ischemic heart disease, heart failure, peripheral arterial disease, cerebrovascular disease, paralysis, chronic pulmonary disease, chronic

liver disease, connective tissue disease, peptic ulcer disease, malignancy, metastatic solid tumor, AIDS, dementia, and depression), cumulative hospital and nursing facility days, calendar year and correlation of patients within facilities.

The modified LOCF approach uses post-dialysis initiation creatinine values to singly impute eGFR at dialysis initiation for patients with missing eGFR values at dialysis initiation.
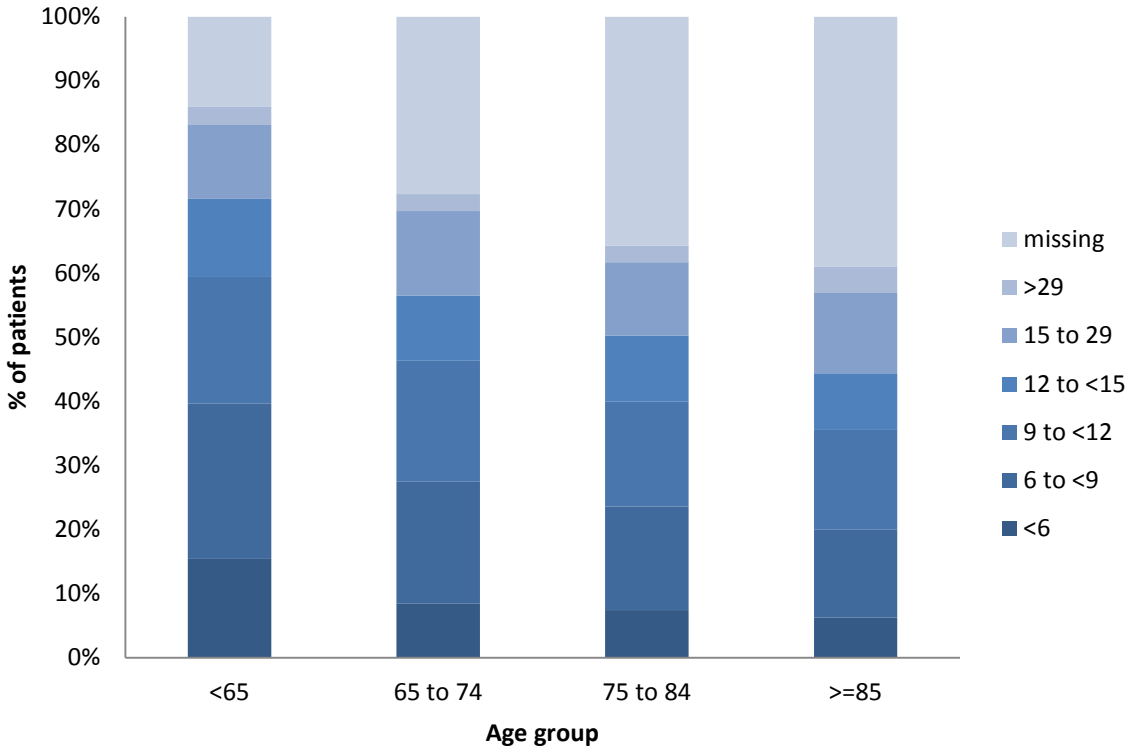
Figure A1. Distribution of estimated glomerular filtration rate at dialysis initiation, by age group