Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

eTable 1. Sustained eGFR Method	ds for Cohort Formation and	Kidney Outcome Ascertainment
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Cohorts	Qualifying period for entry			Outcomes	Qualifying period for outcomes		
	First eGFR	Possible intervening measurements within 90- days of the first	Last eGFR (Index date) >90 days from first		First eGFR	Possible intervening measurements within 90- days of the first	Last eGFR (outcome date) >90 days from first
Moderate CKD	<45	<45	\geq 30 to <45	Regression	≥45	≥45	≥45
				Progression	<30	<30	<30
				Kidney failure _{eGFR}	<15	<15	<15
Severe CKD	<30	<30	≥ 15 to <30	Regression	≥30	≥30	≥30
				Kidney failure _{eGFR}	<15	<15	<15

Legend: CKD regression was defined as a sustained improvement to a better eGFR category for >3 months (>45 for G3b or >30 for G4), accompanied by a 25% or greater increase in the last eGFR from baseline (eGFR at index date). CKD progression was defined as a sustained decrease in eGFR below 30 for CKD stage G3b or below 15 for G4) for >3 months, accompanied by a 25% or greater drop in the last eGFR from baseline (eGFR at index date).

Characteristics	All	Measured	Unmeasured
	N = 65,509	N = 58,004	N = 7,505
Age (years)	79 (71, 85)	78 (70, 85)	83 (75, 89)
<70	15,455 (24)	14,383 (25)	1,072 (14)
70-79	19,897 (30)	18,109 (31)	1,788 (24)
80-84	12,654 (19)	11,219 (19)	1,435 (19)
≥85	17,503 (27)	14,293 (25)	3,210 (43)
Sex			
Female	36,300 (55%)	31,725 (55)	4,575 (61)
Male	29,209 (45%)	26,279 (45)	2,930 (39)
Qualifying period (QP, days)	171 (113, 305)	168 (112, 292)	211 (124, 407)
N of eGFR tests during	2 (2, 3)	2 (2, 3)	2 (2, 3)
Outpatient eGFR before QP			
No prior eGFR	3,497 (5.3%)	2,641 (5)	856 (11)
Prior eGFR recorded	62,012 (95%)	55,363 (95)	6,649 (89)
Index eGFR (mL/min/1.73 m ²)	38 (33, 42)	38 (33, 42)	38 (33, 42)
CKD stage			
G3b	54,725 (84%)	48,376 (83)	6,349 (85)
G4	10,784 (16%)	9,628 (17)	1,156 (15)
Comorbidities	32,002 (49%)		
Cardiovascular disease	6,685 (10%)	27,742 (48)	4,260 (57)
Myocardial infarction	19,617 (30%)	5,818 (10)	867 (12)
Congestive heart failure	4,239 (6.5%)	16,770 (29)	2,847 (38)
Peripheral vascular disease	15,204 (23%)	3,764 (7)	475 (6)
Stroke or TIA	27,524 (42%)	13,218 (23)	1,986 (26)
Diabetes	49,822 (76%)	25,727 (44)	1,797 (24)
Dispensed medications	12,485 (19%)		
ACEi/ARB	33,137 (51%)	44,622 (77)	5,200 (69)
NSAIDs	171 (113, 305)	11,190 (19)	1,295 (17)
Statins	2 (2, 3)	30,299 (52)	2,838 (38)

eTable 2. Baseline Characteristics Including Missing Values of Proteinuria

ACEi, angiotensin-converting enzyme inhibitor; ARB, angiotensin-receptor blocker; eGFR, estimated glomerular filtration rate; NSAIDs, non-steroidal anti-inflammatory drugs; PCR, protein-creatinine ratio; TIA, transient ischemic attack. Values are median (inter quartile range) or number (%).

	Hazard r	atio (95% confidence	interval)
Covariates	Regression	Progr. or KF	Death
Albuminuria ^a			
A1	1 (reference)	1 (reference)	1 (reference)
A2	0.75 (0.72, 0.79)	1.84 (1.75, 1.93)	1.31 (1.27, 1.36)
A3<60	0.47 (0.40, 0.54)	2.92 (2.67, 3.20)	1.36 (1.23, 1.50)
A3≥60	0.27 (0.24, 0.30)	5.64 (5.34, 5.97)	1.50 (1.40, 1.60)
Index eGFR ^b			
15-19	1 (reference)	1 (reference)	1 (reference)
20-24	1.59 (0.46, 5.46)	0.47 (0.31, 0.72)	0.76 (0.32, 1.78)
25-29	2.87 (0.88, 9.35)	0.21 (0.14, 0.32)	0.59 (0.26, 1.34)
30-34	5.64 (1.77, 17.92)	0.16 (0.11, 0.24)	0.56 (0.26, 1.22)
35-39	5.63 (1.81, 17.54)	0.09 (0.06, 0.13)	0.32 (0.15, 0.68)
40-44	3.59 (1.15, 11.17)	0.07 (0.05, 0.10)	0.14 (0.07, 0.30)
Age (10 years)	1.03 (0.89, 1.18)	0.68 (0.65, 0.72)	1.76 (1.61, 1.91)
Age by eGFR			
20-24	1.01 (0.86, 1.18)	1.02 (0.96, 1.09)	1.02 (0.92, 1.14)
25-29	0.93 (0.80, 1.08)	1.06 (0.99, 1.13)	1.03 (0.94, 1.14)
30-34	0.80 (0.69, 0.93)	1.25 (1.19, 1.33)	1.03 (0.94, 1.13)
35-39	0.82 (0.71, 0.95)	1.30 (1.23, 1.38)	1.09 (0.99, 1.19)
40-44	0.85 (0.73, 0.98)	1.28 (1.21, 1.35)	1.18 (1.07, 1.29)
Male vs female	0.85 (0.82, 0.89)	1.09 (1.05, 1.13)	1.22 (1.18, 1.26)
Number of eGFR tests ^c	1.05 (1.04, 1.05)	1.03 (1.03, 1.04)	1.06 (1.05, 1.06)
Diabetes	1.03 (0.99, 1.07)	1.48 (1.42, 1.54)	1.15 (1.12, 1.19)
Myocardial infarction	0.99 (0.93, 1.06)	0.93 (0.88, 1.00)	1.19 (1.13, 1.24)
Congestive heart failure	1.31 (1.25, 1.37)	1.25 (1.20, 1.31)	1.96 (1.89, 2.02)
Stroke/TIA	1.12 (1.07, 1.17)	1.01 (0.96, 1.06)	1.24 (1.20, 1.29)
Peripheral vascular disease	1.11 (1.03, 1.20)	1.09 (1.01, 1.18)	1.50 (1.42, 1.58)
ACEi/ARB	1.04 (1.00, 1.09)	1.12 (1.07, 1.18)	0.77 (0.74, 0.80)
NSAIDs	1.30 (1.25, 1.36)	0.93 (0.88, 0.97)	0.89 (0.86, 0.93)
Statin	0.97 (0.93, 1.01)	1.01 (0.97, 1.05)	0.79 (0.76, 0.82)

eTable 3. Cause-Specific Hazard Ratios for Outcomes (No Interaction Model)

Model log-likelihood (LL) -116443.7 (model without interaction between age and eGFR, LL -116471.1)

Progr. or KF: Progression or kidney failure

^aCategories of albuminuria based on converted and unconverted ACR (albumin-creatinine-ratio) defined as A1 (<3 mg/mmol), A2 (3-29 mg/mmol), A3<60 (30-59 mg/mmol), and A3 \geq 60 (\geq 60 mg/mmol). Converted values were obtained using validated conversion method. Conversion factor for ACR from mg/mmol to mg/g: 0.113.

^bCategories of index eGFR in 5 ml/min/1.73 m² increments

^cNumber of eGFR measurements during the qualifying period pefore cohort entry)

ACEi, angiotensin-converting enzyme inhibitor; ARB, angiotensin-receptor blocker; eGFR, estimated glomerular filtration rate (in mL/min/1.73 m²); KF: kidney failure; NSAIDs, non-steroidal anti-inflammatory drugs; TIA, transient ischemic attack.

	Hazard ratio (95% confidence interval)					
Covariates	Regression	Progr. or KF	Death			
Albuminuria ^a						
A1	1 (reference)	1 (reference)	1 (reference)			
A2	0.47 (0.32, 0.70)	2.01 (1.43, 2.81)	0.92 (0.77, 1.11)			
A3<60	0.36 (0.13, 1.01)	3.33 (2.11, 5.23)	0.90 (0.55, 1.46)			
$A3_{\geq_{60}}$	0.17 (0.09, 0.35)	7.34 (5.33, 10.11)	1.00 (0.77, 1.30)			
Index eGFR ^b						
15-19	1 (reference)	1 (reference)	1 (reference)			
20-24	1.31 (0.33, 5.24)	0.58 (0.31, 1.10)	0.50 (0.19, 1.29)			
25-29	2.03 (0.54, 7.71)	0.26 (0.14, 0.49)	0.32 (0.13, 0.80)			
30-34	3.34 (0.90, 12.35)	0.24 (0.14, 0.41)	0.31 (0.13, 0.73)			
35-39	2.93 (0.81, 10.58)	0.15 (0.09, 0.25)	0.16 (0.07, 0.38)			
40-44	1.65 (0.46, 5.97)	0.08 (0.05, 0.14)	0.07 (0.03, 0.15)			
Albuminuria by eGFR						
A2, 20-24	1.17 (0.76, 1.79)	0.98 (0.65, 1.49)	1.28 (1.03, 1.60)			
A3<60, 20-24	0.84 (0.27, 2.57)	0.74 (0.42, 1.29)	1.07 (0.61, 1.87)			
A3≥60, 20-24	1.05 (0.48, 2.32)	0.86 (0.57, 1.27)	1.35 (0.98, 1.85)			
A2, 25-29	1.24 (0.83, 1.87)	1.10 (0.74, 1.65)	1.27 (1.03, 1.56)			
A3<60, 25-29	0.93 (0.31, 2.81)	1.11 (0.64, 1.93)	1.30 (0.76, 2.23)			
A3≥ ₆₀ , 25-29	1.23 (0.57, 2.64)	0.83 (0.56, 1.23)	1.57 (1.16, 2.12)			
A2, 30-34	1.49 (1.00, 2.23)	0.88 (0.62, 1.26)	1.39 (1.14, 1.70)			
A3<60, 30-34	1.11 (0.36, 3.38)	0.87 (0.53, 1.42)	1.74 (1.01, 3.01)			
A3≥ ₆₀ , 30-34	1.20 (0.55, 2.59)	0.74 (0.53, 1.03)	1.34 (0.99, 1.82)			
A2, 35-39	1.61 (1.09, 2.39)	0.85 (0.60, 1.20)	1.42 (1.17, 1.73)			
A3<60, 35-39	1.26 (0.43, 3.66)	0.78 (0.48, 1.26)	1.76 (1.04, 2.98)			
A3≥60, 35-39	1.69 (0.81, 3.52)	0.68 (0.49, 0.94)	1.48 (1.10, 1.99)			
A2, 40-44	1.86 (1.26, 2.75)	0.98 (0.69, 1.39)	1.59 (1.31, 1.93)			
A3<60, 40-44	1.83 (0.64, 5.25)	1.06 (0.65, 1.71)	1.69 (1.00, 2.88)			
A3≥60, 40-44	2.05 (0.98, 4.29)	0.85 (0.61, 1.18)	1.74 (1.29, 2.34)			
Age (10 years)	0.97 (0.83, 1.13)	0.70 (0.66, 0.73)	1.67 (1.52, 1.83)			
Age by eGFR			1107 (1102, 1100)			
20-24	1.02 (0.87, 1.21)	1.01 (0.94, 1.08)	1.06 (0.95, 1.18)			
25-29	0.96 (0.81, 1.13)	1.04 (0.97, 1.12)	1.09 (0.98, 1.21)			
30-34	0.84 (0.72, 0.99)	1.23 (1.16, 1.30)	1.08 (0.98, 1.20)			
35-39	0.87 (0.75, 1.02)	1.26 (1.19, 1.34)	1.15 (1.04, 1.26)			
40-44	0.91 (0.78, 1.06)	1.27 (1.20, 1.35)	1.25 (1.13, 1.38)			
Male vs female	0.85 (0.82, 0.89)	1.09 (1.05, 1.13)	1.22 (1.18, 1.26)			
Number of eGFR tests ^c	1.05 (1.04, 1.06)	1.03 (1.03, 1.04)	1.06 (1.05, 1.06)			
Diabetes	1.02 (0.98, 1.07)	1.48 (1.42, 1.54)	1.15 (1.11, 1.19)			
Myocardial infarction	0.99 (0.93, 1.06)	0.93 (0.88, 1.00)	1.19 (1.13, 1.25)			
Congestive heart failure	1.31 (1.25, 1.37)	1.25 (1.20, 1.31)	1.95 (1.89, 2.02)			
Stroke/TIA	1.12 (1.07, 1.17)	1.01 (0.96, 1.06)	1.24 (1.20, 1.28)			
Peripheral vascular disease	1.11 (1.03, 1.20)	1.09 (1.01, 1.18)	1.50 (1.42, 1.58)			
ACEi/ARB	1.04 (0.99, 1.09)	1.12 (1.07, 1.18)	0.77 (0.74, 0.79)			
NSAIDs	1.30 (1.25, 1.36)	0.93 (0.88, 0.97)	0.89 (0.86, 0.93)			
Statin	0.97 (0.93, 1.01)	1.01 (0.97, 1.05)	0.79 (0.76, 0.82)			

eTable 4. Cause-Specific Hazard Ratios for Outcomes (Interaction Model)

Model log-likelihood (LL) -116410.3 (Likelihood ratio test (chisq.) vs model without albuminuria by eGFR interaction (eTable 2) 66.8 [DF 15], p<0.01)

Progr. or KF: Progression or kidney failure

^aCategories of albuminuria based on converted and unconverted ACR (albumin-creatinine-ratio) defined as A1 (<3 mg/mmol), A2 (3-29 mg/mmol), A3<60 (30-59 mg/mmol), and A3≥60 (≥60 mg/mmol). Converted values were obtained using validated conversion method. Conversion factor for ACR from mg/mmol to mg/g: 0.113.

^bCategories of index eGFR in 5 ml/min/1.73 m² increments

^cNumber of eGFR measurements during the qualifying period pefore cohort entry)

ACEi, angiotensin-converting enzyme inhibitor; ARB, angiotensin-receptor blocker; eGFR, estimated glomerular filtration rate (in mL/min/1.73 m²); KF: kidney failure; NSAIDs, non-steroidal anti-inflammatory drugs; TIA, transient ischemic attack.

eTable 5. Cause-Specific Hazard Ratios for Regression (Sensitivity and Subgroup Analyses) Associated With Albuminuria

Model [#]	Albuminuria category	Hazard ratio	2.5% confidence limit	97.5% confidence limit
	A1	1 (reference)	-	-
Iain analysis (N=58,004) ensitivity analysis (N=58,004) Ibuminuria type ACR N=27,052) Ibuminuria type DIP/PCR N=30,952) Ibuminuria 0-1 year before ntry (N=42,444) Ibuminuria 1-3 years before	A2	0.75	0.72	0.79
Main analysis (N=58,004)	A3a	0.47	0.4	0.54
	A3b	0.27	0.24	0.3
	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	-		
C	A2	0.7	0.66	0.74
Sensitivity analysis (N=58,004)	A3a	0.41	0.34	0.49
	A3b	0.22	0.19	0.25
	A1	1 (reference)	-	-
Albuminuria type ACR	A2	0.71	0.67	0.76
(N=27,052)	A3a		0.38	0.54
	A3b	0.21	0.18	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
		1 (reference)	-	-
Albuminuria type DIP/PCR	A2	0.8	0.75	0.86
(N=30,952)	A3a	0.47	0.34	0.64
	A3b	0.38	0.32	0.46
		1 (reference)	-	-
Albuminuria 0-1 year before	A2	0.73	0.7	0.78
ntry (N=42,444)	A3a		0.39	0.55
	A3b	hargoryHazard ratio2.5% confidence limitA11 (reference)-A20.750.72A3a0.470.4A3b0.270.24A11 (reference)-A20.70.66A3a0.410.34A3b0.220.19A11 (reference)-A20.710.67A3a0.450.38A3b0.220.19A11 (reference)-A20.710.67A3a0.450.38A3b0.210.18A11 (reference)-A20.80.75A3a0.470.34A3b0.380.32A11 (reference)-A20.730.7A3a0.460.39A3b0.270.24A11 (reference)-A20.790.72A3a0.50.35A3b0.250.18A11 (reference)-A20.760.73A3a0.470.4A3b0.260.12A3a0.470.4A3b0.260.12A3a0.470.19A3a0.470.19A3a0.470.19A3a0.470.19A3a0.420.35A3a0.420.35A3a0.420.35A	0.31	
		1 (reference)	-	-
Albuminuria 1-3 years before	A2		0.72	0.86
entry (N=15,560)	A3a	0.5	0.35	0.7
	A3b	0.25	0.18	0.35
		1 (reference)	-	-
Prior outpatient	A2			0.8
eGFR(N=56,131)	A3a		0.4	0.55
			0.24	0.3
			-	
No prior outpatient	A2		0.35	
eGFR(N=2,641)	A3a		0.19	1.19
			0.12	0.58
		1 (reference)	-	-
Sustained albuminuria				
(N=14,346)				
			0.21	0.27
Non-sustained albuminuria				0.85
(N=43,658)	A3a	0.64	0.47	0.87
	A3b	0.39	0.3	0.5

#Models are non-interaction models including the same covariates as in eTable 3.

Model	eGFR ^a	Albuminuria category	Hazard ratio ^b	2.5% confidence limit	97.5% confidence limit
Non-		A1	1 (reference)		
interaction	15-44	A2	0.75	0.72	0.79
Cause- specific Cox		A3a	0.47	0.4	0.54
regression		A3b	0.27	0.24	0.3
Non-		A1	1 (reference)		
		A2	0.67	0.64	0.7
distribution	15-44	A3a	0.39	0.33	0.45
Gray		A3b	0.16	0.15	0.19
regression Non- interaction Sub- distribution Fine and Gray regression 4(33) Interaction Cause- specific Cox regression 22)		A1	1 (reference)		
	10.11	A2	0.88	0.82	0.95
	40-44	A3a	0.66	0.51	0.86
		A3b	0.36	0.28	0.45
		A1	1 (reference)		
	35-39	A2	0.77	0.71	0.83
		A3a	0.46	0.34	0.62
		A3b	0.29	0.24	0.37
		A1	1 (reference)		
	30-34	A2	0.71	0.63	0.8
Interaction	50-54	A3a	0.4	0.26	0.63
		A3b	0.21	0.15	0.29
specific Cox		A1	1 (reference)		
regression	25-29	A2	0.59	0.52	0.67
	23-29	A3a	0.34	0.22	0.51
		A3b	0.21	0.16	0.29
		A1	1 (reference)		
	20-24	A2	0.55	0.46	0.66
	20-24	A3a	0.3	0.19	0.48
		A3b	0.18	0.13	0.26
		A1	1 (reference)		
	15-19	A2	0.47	0.32	0.7
	13-17	A3a	0.36	0.13	1.01
		A3b	0.17	0.09	0.35
Interaction		A1	1 (reference)		
Sub-	40-44	A2	0.78	0.72	0.84
distribution Fine and	-0-44	A3a	0.55	0.43	0.71
Gray		A3b	0.24	0.19	0.3
regression	35-39	A1	1 (reference)		

eTable 6. Cause-Specific Hazard Ratios, Subdistribution Hazard Ratios for Regression Associated With Albuminuria

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		A2	0.68	0.63	0.73
		A3a	0.35	0.26	0.47
		A3b	0.18	0.14	0.23
		A1	1 (reference)		
	20.24	A2	0.61	0.54	0.68
	30-34	A3a	0.29	0.19	0.45
		A3b	0.11	0.08	0.15
		A1	1 (reference)		
	25-29	A2	0.55	0.48	0.62
		A3a	0.31	0.2	0.47
		A3b	0.15	0.11	0.21
		A1	1 (reference)		
	20.24	A2	0.5	0.42	0.59
	20-24	A3a	0.3	0.19	0.48
		A3b	0.11	0.08	0.16
		A1	1 (reference)		
	15.10	A2	0.43	0.3	0.63
	15-19	A3a	0.29	0.1	0.83
		A3b	0.08	0.04	0.18
L	1				

Legend: Non-interaction models do not include the interaction between albuminuria and eGFR; interaction models do. Models are adjusted for the same variables included in the Cox models summarized in eTables 2-3.

eGFR^a indicates the index eGFR category in 5 ml/min/1.73 m² increments from 15 to 44.

Hazard ratio^b indicates the exponentiated coefficient of the model, cause-specific hazard ratio for Cox regression and subdistribution hazard ratio for the Fine and Gray model. eFigure 1. Derivation of Study Cohort

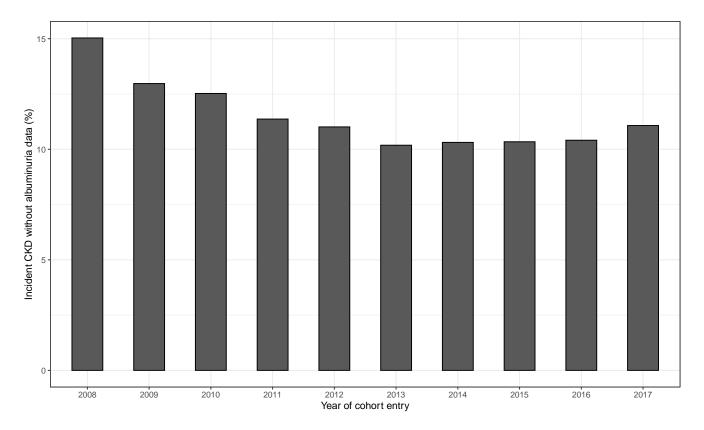
Number of residents registered in Alberta Health Apr 1, 1994 – Mar 31, 2017 (N)	4,983	,956
Common exclusion criteria (N excluded):	4,644	,966
• No serum creatinine measurements, May 1, 2002 – Mar 31, 2017	1,573	,084
• No outpatient serum creatinine measurements	201,9	969
• All outpatient serum creatinine were tested under 18 years old	31,9	71
• All outpatient serum creatinine measurements were after out-migration, registration end or accrual end (March 31, 2017)	6,09	99
 Never had an outpatient eGFR measurement <60 ml/min/1.73 m² 	2,697	,464
• Only 1 outpatient eGFR <60 ml/min/1.73 m ²	129,4	412
• The first eGFR less than 60 was already <15 ml/min/1.73 m ²	4,967	
Incident CKD stage (N)	G3b (54,725) G4 (18,	
Unique exclusion criteria (N excluded):	284,265	320,316
• Did not meet the sustained eGFR criterion for specific stage, for >90 days	246,755	307,004
• Index date was not between Apr 1, 2008 and Mar 31, 2017	36,510	12,197
• Index date was on the earliest date of death, out-migration, registration end or accrual end	20	8
• At least 1 outpatient eGFR <15 ml/min/1.73 m ² prior to the qualifying period	282	541
• Initiated kidney replacement therapy on or prior to index date	698	566
G3b-G4 CKD Cohort	65,5	09
No proteinuria measurements in the 3 years look-back window	7,50	05
G3b-G4 CKD with at least 1 proteinuria measurements within 3 years of meeting G3b G4 CKD criteria (Cohort size N)	58,0	04

Legend

• Alberta population registry started in 1994. Serum creatinine database started on May 1, 2002, with nearly complete coverage from July 1, 2003 (~98% of the Alberta population) and complete coverage from January 1, 2005 (100%). The ~1/3 of the population (n=1,573,084) who never had an eGFR measurement largely comprises people who were in the registry before the study start date (April 1, 2009). We considered all the available information preceding Apr 1, 2008 (look-back window for eGFR measurements and other data) to minimize the inclusion of prevalent cases in the incident CKD cohorts between Apr 1, 2008, and Mar 31, 2017.

Of those who were registered for at least 1 fiscal year between Apr 1, 2008, and Mar 31, 2017, 22% did not have a serum creatinine measurement. Most of these (~85%) were younger than 40 years, an expected figure considering that a screening test for serum creatinine is not recommended for most people under 40 in the absence of risk factors for CKD.

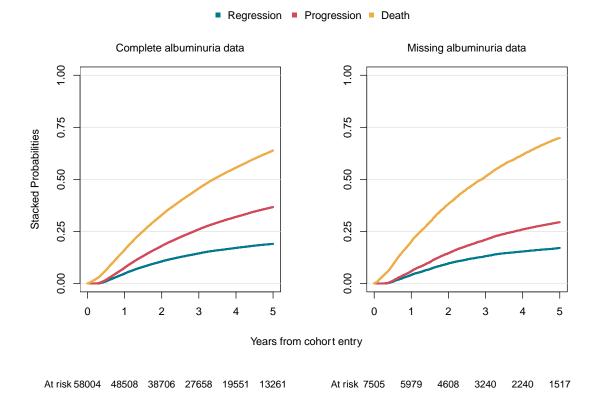
- Sustained eGFR criterion for specific stage: eGFR 30-44 ml/min/1.73 m² for G3b CKD and 15-29 ml/min/1.73 m² for G4 CKD.
- G3b-G4 CKD cohort: if an individual appeared in both G3b and G4 CKD cohorts, only the observation in G3b cohort was used (first encounter).



eFigure 2. Study Participants With Missing Albuminuria Measures Per Year Prior to the Study Period

Bars refer to the percentage of incident adults with CKD who were not tested for albuminuria during the study accrual period.

eFigure 3. Cumulative Incidence Functions for Outcomes in People With Complete and Missing Albuminuria Data



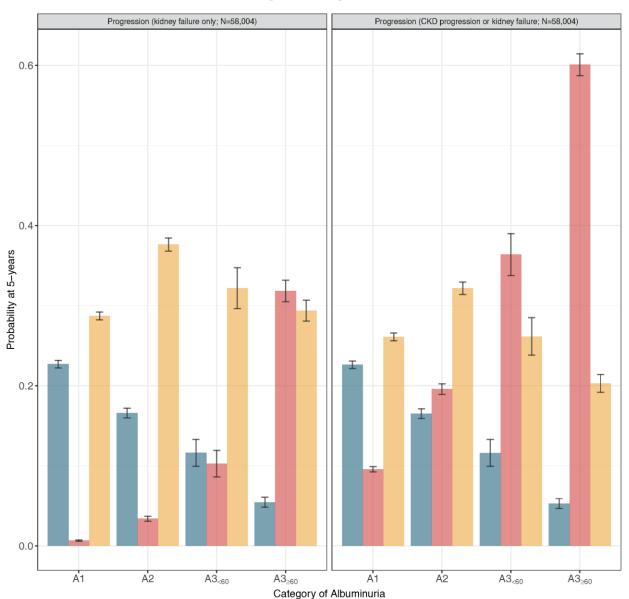
Legend: Cumulative incidence of CKD regression, CKD progression (progression or kidney failure), and death without regression, progression or kidney failure for participants with and without available measures of albuminuria.

			No. of Events	s HR	95% CI	p-valu
odel 2						
	A1, eGFR 40-44		3313	1.65	[0.46-5.97]	=0.4
	A1, eGFR 35-39	⊦	→ 2566	2.93	[0.81-10.58]	=0.1
	A1, eGFR 30-34		→ 1129	3.34	[0.9-12.35]	=0.0
	A1, eGFR 25-29	⊢ ⊨ ■	→ 771	2.03	[0.54-7.71]	=0.3
	A1, eGFR 20-24	⊢ ∎	382	1.31	[0.33-5.24]	=0.7
	A1, eGFR 15-19 (ref)	•	82	1		
	A2, eGFR 40-44		→ 915	3.07	[0.91-10.38]	=0.0
	A2, eGFR 35-39	⊢	→ 773	4.72	[1.39-15.98]	=0.0
	A2, eGFR 30-34	⊢∎	→ 365	4.98	[1.44-17.25]	=0.0
	A2, eGFR 25-29	⊢ –	→ 322	2.53	[0.71-8.96]	=0.7
	A2, eGFR 20-24		185	1.53	[0.41-5.72]	=0.8
	A2, eGFR 15-19 (ref)	•	41	1		
	A3<60, eGFR 40-44	⊢ –	→ 61	3.03	[0.7-13.16]	=0.
	A3<60, eGFR 35-39	⊦⊢∎_	\rightarrow 43	3.68	[0.84-16.16]	=0.
	A3<60, eGFR 30-34	⊦⊢∎_	\rightarrow 20	3.7	[0.81-17.01]	=0.0
	A3<60, eGFR 25-29	⊢ ⊢ ∎	→ 23	1.89	[0.41-8.81]	=0.4
	A3<60, eGFR 20-24	⊢ ⊨ i	20	1.1	[0.23-5.34]	=0.
	A3<60, eGFR 15-19 (ref)	•	4	1		
	A3≥60, eGFR 40-44	- -	→ 75	3.39	[1.01-11.42]	=0.
	A3≥60, eGFR 35-39	⊢∎	⊳ 84	4.94	[1.47-16.64]	=0.
	A3≥60, eGFR 30-34	⊢ ∎_	\rightarrow 20	4.01	[1.15-13.94]	=0.
	A3≥60, eGFR 25-29	⊢ ⊨ ■	→ 23	2.5	[0.71-8.83]	=0.
	A3≥60, eGFR 20-24	I I I I I I I I I I I I I I I I I I I	20	1.37	[0.37-5.13]	=0.
	A3≥60, eGFR 15-19 (ref)	•	10	1		
	A1 (ref)	•	8243	1		
	A2	⊢∎⊣	2601	0.47	[0.32-0.7]	<0.0
	A3<60	⊢∎	171	0.36	[0.13-1.01]	=0.0
	A3≥60	←∎	287	0.17	[0.09-0.35]	<0.0

eFigure 4. Association Between eGFR and CKD Regression Across Albuminuria Categories

Model 2 is the same model as Model 2 in Figure 4. Model 2 includes the same covariates as Model 1 in Figure 4 (eTable 3), with the additional interaction between albuminuria and index eGFR category (eTable 4). This model shows the linear combinations of the coefficients (epidemiological formulation) instead of differences in log-hazard ratios (statistical interaction formulation) to summarize the association between eGFR and CKD regression across categories of albuminuria.

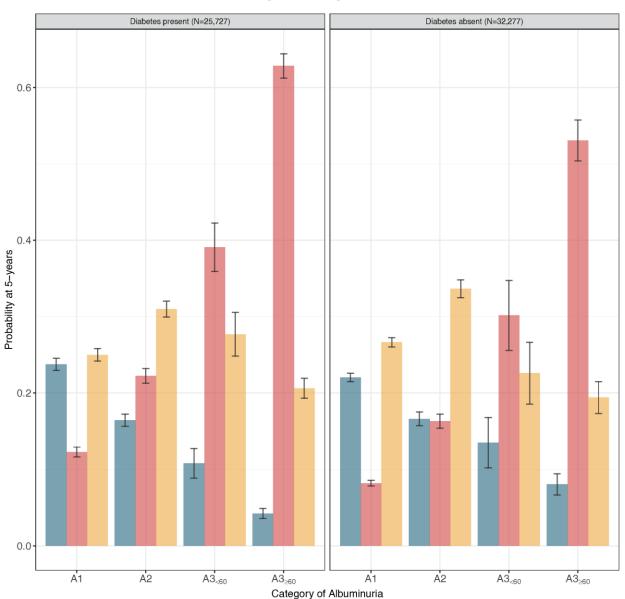




Regression Progression Death

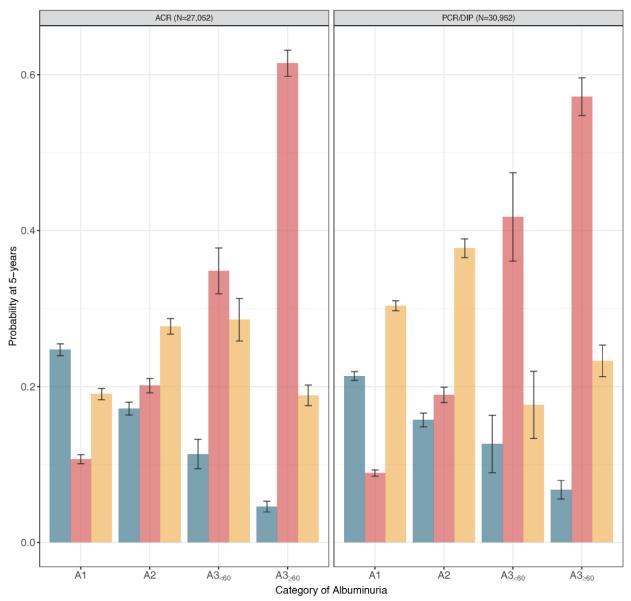
Outcome probabilities were estimated using cumulative incidence functions at 5 years after study entry by category of albuminuria. Progression represents chronic kidney disease (CKD) kidney failure only (i.e., sustained eGFR <10 ml/min/1.73 m2 or initiation of chronic kidney replacement therapy). Death refers to death without regression or kidney failure.

eFigure 6. Crude 5-Year Risk of Outcomes by Diabetes Status



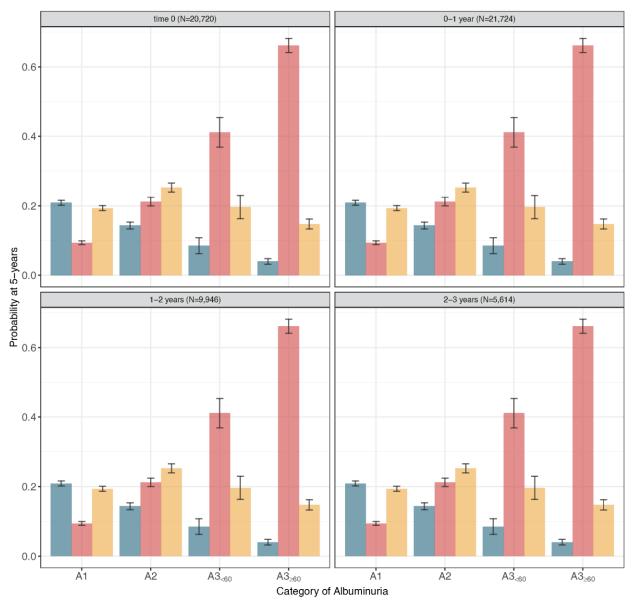
Regression Progression Death

Outcome probabilities were estimated using cumulative incidence functions at 5 years after study entry by category of albuminuria. Progression represents chronic kidney disease (CKD) progression or kidney failure. Death refers to death without regression, progression or kidney failure.



eFigure 7. Crude 5-Year Risk of Outcomes According to the Type of Albuminuria Measurement
Regression Progression Death

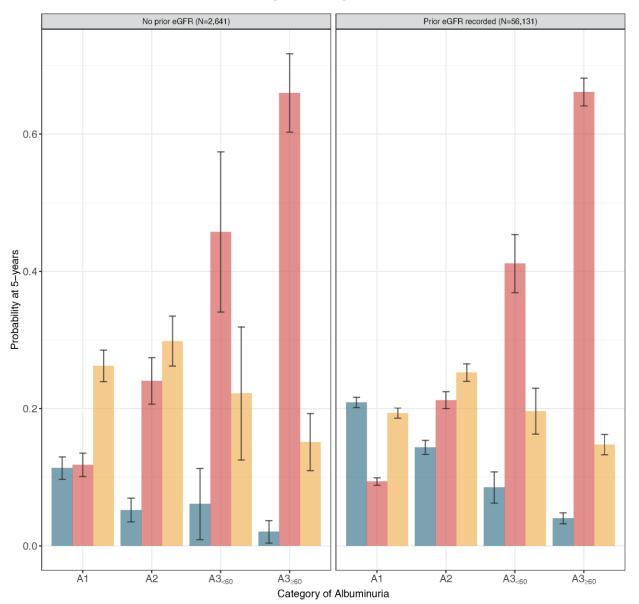
Outcome probabilities were estimated using cumulative incidence functions at 5 years after study entry by category of albuminuria. Progression represents chronic kidney disease (CKD) progression or kidney failure. Death refers to death without regression, progression or kidney failure. ACR: albumin to creatinine ratio; PCR: protein to creatinine ratio; DIP: dipstick urine protein.



eFigure 8. Crude 5-Year Risk of Outcomes According to Timing of Albuminuria Measurement
Regression Progression Death

Outcome probabilities were estimated using cumulative incidence functions at 5 years after study entry by category of albuminuria. Progression represents chronic kidney disease (CKD) progression or kidney failure. Death refers to death without regression, progression or kidney failure. Time 0: albuminuria measured on the index date; time 0-1: albuminuria measured in the year before index date; time 1-2: albuminuria measured in the second year before index date; time 2-3: albuminuria measured in the third year before index date.

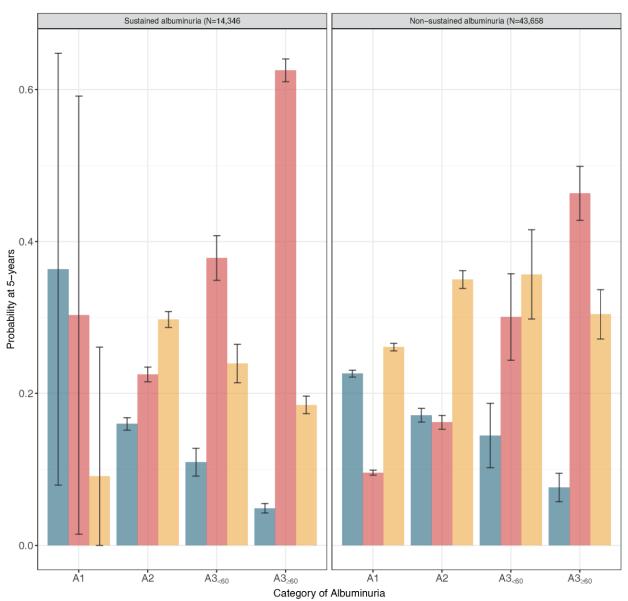
eFigure 9. Crude 5-Year Risk of Outcomes in Participants Without and With eGFR Before Study Entry



Regression Progression Death

Outcome probabilities were estimated using cumulative incidence functions at 5 years after study entry by category of albuminuria. Progression represents chronic kidney disease (CKD) progression or kidney failure. Death refers to death without regression, progression or kidney failure.

eFigure 10. Crude 5-Year Risk of Outcomes in Participants With and Without Sustained Albuminuria at Baseline



Regression Progression Death

Outcome probabilities were estimated using cumulative incidence functions at 5 years after study entry by category of albuminuria. Progression represents chronic kidney disease (CKD) progression or kidney failure. Death refers to death without regression, progression or kidney failure.