

**Supplementary table S1. Diagnostic (ICD-10) and procedure (ACHI) codes used to identify candidate predictor variables from hospital administrative databases.**

<b>Comorbidity</b>	<b>ICD-10 and ACHI codes</b>
Smoking	F17, T65.2, Z72.0, Z86.43
Diabetes	E10-14, Y42.3, Z92.22 95550-14
Hypertension	I10-15, U82.3
Cerebrovascular disease	G45, G83.81, I63-66, I69 33500
Cardiovascular disease	I20-22, I24-25, U82.1, Z95.5 38215, 38218, 38306, 38312, 38497, 38500, 38503, 38637
Peripheral vascular disease	E11.51-52, I70-71, I73.1, I73.8-9, I74, I77.1, I79.0, I79.2, K55.1, K55.8-9, Z95.8-9 32718, 32742, 32745, 32760, 32763, 32766, 33103, 33112, 33115, 33116, 33118, 33121, 33124, 33145, 33154, 33172, 33521, 33539, 33548, 33554, 33806, 33845, 34103, 34106, 35202, 35303, 35309, 35317, 38550, 38553, 38556, 38559, 38562, 38565, 38572, 60000, 60048, 60060, 60072, 60078
Chronic heart failure	E11.53, I09.2, I11.0, I13.0, I13.2, I25.5, I42.0, I42.5-9, I43, I50
Arrhythmia	11718, 11721, 11727, 13400, 38256, 38290, 38350, 38353, 38368, 38390, 38393, 90203
Valvular disease	Z95.2 38270, 38475, 38477, 38480, 38488, 38489, 38490, 38493, 38553, 38556, 38559, 38562, 38565
Lung disease	J84.1, J84.8-9, J96.1, U83.1-4 38421, 38424
Liver disease	B18, I85-86, I98, K70-74, K76, T86.4, Z94.4

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	30409, 30411, 30412, 30414, 30415, 30418, 30421, 30476, 90317, 90319, 90318, 90334
Leukaemia	13706-06, M9801/3, M9805/3, M9823/3, M9835/3, M9836/3, M9837/3, M9861/3, M9866/3, M9867/3, M9871/3, M9872/3, M9891/3, M9895/3, M9896/3, M9920/3, M9945/3
Lymphoma	M9591/3, M9650/3, M9652/3, M9663/3, M9671/3, M9673/3, M9680/3, M9687/3, M9688/3, M9698/3, M9699/3, M9700/3, M9731/3, M9732/3, M9733/3, M9761/3, M9765/1
Non-metastatic malignancy	M8000/3, M8010/3, M8012/3, M8013/3, M8041/3, M8046/3, M8120/3, M8140/3, M8144/3, M8160/3, M8170/3, M8170/9, M8169/3, M8200/3, M8240/3, M8246/3, M8250/3, M8255/3, M8260/3, M8263/3, M8312/3, M8330/3, M8337/3, M8720/3, M8721/3, M8742/3, M8743/3, M8772/3
Metastatic malignancy	C77-80 M8000/6, M8010/6, M8012/6, M8013/6, M8041/6, M8046/6, M8070/6, M8071/6, M8120/6, M8140/6, M8144/6, M8160/6, M8170/6, M8169/6, M8240/6, M8246/6, M8255/6, M8260/6, M8263/6, M8312/6, M8330/6, M8337/6, M8720/6, M8721/6, M8742/6, M8743/6, M8772/6

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ACHI, Australian Classification of Health Interventions; ICD-10, International Classification of Diseases, 10th Revision.

**Supplementary table S2. Baseline characteristics of patients with complete and incomplete follow up data.**

	<b>All (n=2101)</b>	<b>Complete (n=1744)</b>	<b>Incomplete (n=357)</b>	<b>P value</b>
<b>Male</b>	1225 (58)	1029 (59)	196 (55)	0.15
<b>Age, years</b>	69.1 (15.2)	69.0 (14.7)	69.6 (17.4)	0.53
<b>ARIA score</b>				0.002
<i>Major city</i>	1829 (87)	1538 (88)	291 (82)	
<i>Regional</i>	263 (13)	198 (11)	65 (18)	
<i>Remote</i>	7 (<1)	6 (<1)	1 (<1)	
<i>Missing</i>	2 (<1)	2 (<1)	0 (0)	
<b>Smoking</b>	856 (41)	724 (42)	132 (37)	0.11
<b>Diabetes</b>	817 (39)	695 (40)	122 (34)	0.05
<b>Hypertension</b>	629 (30)	516 (30)	113 (32)	0.44
<b>Cerebrovascular disease</b>	139 (7)	109 (6)	30 (8)	0.14
<b>Cardiovascular disease</b>	386 (18)	309 (18)	77 (22)	0.09
<b>Peripheral vascular disease</b>	229 (11)	186 (11)	43 (12)	0.45
<b>Chronic heart failure</b>	450 (21)	378 (22)	72 (20)	0.53
<b>Arrhythmia</b>	625 (30)	510 (29)	115 (32)	0.26
<b>Valvular disease</b>	126 (6)	100 (6)	26 (7)	0.26
<b>Lung disease</b>	348 (17)	302 (17)	46 (13)	0.04
<b>Liver disease</b>	360 (17)	319 (18)	41 (11)	0.002
<b>Haematological disease</b>				0.33
<i>Leukaemia</i>	81 (4)	72 (4)	9 (3)	
<i>Lymphoma</i>	9 (<1)	7 (<1)	2 (1)	
<b>Malignancy</b>				
<i>Non-metastatic</i>	250 (12)	223 (13)	27 (8)	<0.001
<i>Metastatic</i>	157 (7)	141 (8)	16 (4)	

<b>Baseline creatinine, <math>\mu\text{mol/L}</math></b>	88.5 (27.4)	89.7 (27.7)	82.5 (25.3)	<0.001
<b>Baseline eGFR, mL/min/1.73m<sup>2</sup></b>	72.4 (22.5)	72.1 (23.3)	76.2 (24.4)	0.003
<b>Albuminuria</b>				0.36
<i>None</i>	371 (18)	321 (18)	50 (14)	
<i>3-30 mg/mmol</i>	144 (7)	130 (7)	14 (4)	
<i>&gt;30 mg/mmol</i>	68 (3)	57 (3)	11 (3)	
<i>Unmeasured</i>	1518 (72)	1236 (71)	282 (79)	
<b>Acute kidney injury stage</b>				0.065
<i>Stage 1</i>	1256 (60)	1061 (61)	195 (55)	
<i>Stage 2</i>	519 (25)	424 (24)	95 (27)	
<i>Stage 3</i>	326 (16)	259 (15)	67 (19)	
<b>Discharge creatinine, <math>\mu\text{mol/L}</math></b>	109.5 (48.8)	111.0 (50.3)	101.6 (39.8)	<0.001
<b>Discharge eGFR, mL/min/1.73m<sup>2</sup></b>	61.4 (25.0)	60.7 (24.8)	64.8 (25.7)	0.005
<b>Admission type</b>				0.85
<i>Emergency</i>	1696 (81)	1411 (81)	285 (80)	
<i>Elective</i>	309 (15)	253 (15)	56 (16)	
<i>Other</i>	96 (5)	80 (5)	16 (4)	
<b>Admission unit</b>				0.011
<i>General medicine</i>	717 (34)	598 (34)	119 (33)	
<i>Specialty medicine</i>	673 (32)	574 (33)	99 (28)	
<i>General surgery</i>	372 (18)	312 (18)	60 (17)	
<i>Specialty surgery</i>	306 (15)	233 (13)	73 (20)	
<i>Renal</i>	20 (1)	16 (1)	4 (1)	
<i>Missing</i>	13 (1)	11 (1)	2 (1)	
<b>Admission ward</b>				
<i>Intensive care unit</i>	621 (30)	491 (28)	130 (36)	0.002
<i>Coronary care unit</i>	219 (10)	165 (9)	54 (15)	0.001
<b>Hospital length of stay, days</b>	9.0 (5.0, 18.0)	9.0 (5.0, 18.0)	10.0 (6.0, 19.0)	0.38
<b>Intensive care unit, days</b>	3.4 (1.7, 6.5)	3.2 (1.7, 6.4)	3.8 (1.7, 6.9)	0.45
<b>Coronary care unit, days</b>	2.5 (1.3, 4.1)	2.3 (1.2, 3.8)	2.8 (1.8, 4.5)	0.050

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<b>Discharge destination</b>				<0.001
<i>Home</i>	1879 (89)	1588 (91)	291 (82)	
<i>Nursing home</i>	127 (6)	89 (5)	38 (11)	
<i>Other</i>	95 (5)	67 (4)	28 (8)	

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Abbreviations: ARIA, Accessibility/Remoteness Index of Australia; eGFR, estimated glomerular filtration rate; LDL, low density lipoprotein; MAKE, major adverse kidney event.

**Supplementary table S3. Multivariable Cox regression analysis of major adverse kidney events within the first year in hospitalised adults with acute kidney injury at a single centre between 2012 and 2016, following multiple imputation of missing outcome data.**

	<b>Hazard Ratio</b>	<b>95% Confidence Interval</b>	<b>P value</b>
<b>Age, per decade</b>	1.17	1.10 - 1.23	<0.001
<b>Acute kidney injury stage</b>			
<i>Stage 1</i>	(ref)		<0.001
<i>Stage 2</i>	1.40	1.20 - 1.64	
<i>Stage 3</i>	1.73	1.43 - 2.11	
<b>Discharge creatinine, per 10 µmol/L</b>	1.04	1.02 - 1.05	<0.001
<b>Length of stay, per 10 days</b>	1.01	0.98 - 1.05	0.34
<b>Chronic heart failure</b>	1.36	1.17 - 1.60	<0.001
<b>Liver disease</b>	1.56	1.31 - 1.87	<0.001
<b>Haematological disease</b>			
<i>Nil</i>	(ref)		0.64
<i>Leukaemia</i>	1.24	0.86 - 1.77	
<i>Lymphoma</i>	0.96	0.30 - 3.12	
<b>Malignancy</b>			
<i>Nil</i>	(ref)		<0.001
<i>Non-metastatic</i>	1.37	1.09 - 1.86	
<i>Metastatic</i>	2.09	1.68 - 2.58	

**Supplementary table S4. Multivariable Cox regression analysis of major adverse kidney events within the first year in hospitalised adults with acute kidney injury at a single centre between 2012 and 2016, using an alternative definition of chronic kidney disease.**

	<b>Hazard Ratio</b>	<b>95% Confidence Interval</b>	<b>P value</b>
<b>Age, per decade</b>	1.33	1.22 - 1.45	<0.001
<b>Acute kidney injury stage</b>			
<i>Stage 1</i>	(ref)		0.64
<i>Stage 2</i>	1.02	0.81 - 1.28	
<i>Stage 3</i>	0.87	0.64 – 1.19	
<b>Discharge creatinine, per 10 µmol/L</b>	1.06	1.04 - 1.07	<0.001
<b>Chronic heart failure</b>	1.55	1.25 - 1.92	<0.001
<b>Liver disease</b>	1.44	1.09 – 1.92	0.001
<b>Haematological disease</b>			
<i>Nil</i>	(ref)		0.11
<i>Leukaemia</i>	1.66	1.03 – 2.67	
<i>Lymphoma</i>	0.00	0.00 - ∞	
<b>Malignancy</b>			
<i>Nil</i>	(ref)		<0.001
<i>Non-metastatic</i>	1.54	1.12 – 2.13	
<i>Metastatic</i>	3.99	3.08 – 5.17	

**Supplementary table S5. Multivariable Cox regression analysis of major adverse kidney events within the first year in hospitalised adults with acute kidney injury at a single centre between 2012 and 2016, in non-critically ill patients.**

	<b>Hazard Ratio</b>	<b>95% Confidence Interval</b>	<b>P value</b>
<b>Age, per decade</b>	1.17	1.09 - 1.26	<0.001
<b>Acute kidney injury stage</b>			
<i>Stage 1</i>	(ref)		<0.001
<i>Stage 2</i>	1.38	1.13 - 1.69	
<i>Stage 3</i>	1.50	1.13 - 2.00	
<b>Discharge creatinine, per 10 µmol/L</b>	1.04	1.02 - 1.06	<0.001
<b>Length of stay, per 10 days</b>	1.05	0.99 - 1.12	0.11
<b>Chronic heart failure</b>	1.52	1.24 - 1.86	<0.001
<b>Liver disease</b>	1.71	1.34 - 2.19	<0.001
<b>Haematological disease</b>			
<i>Nil</i>	(ref)		0.41
<i>Leukaemia</i>	1.20	1.03 - 2.67	
<i>Lymphoma</i>	0.36	0.05 - 2.62	
<b>Malignancy</b>			
<i>Nil</i>	(ref)		<0.001
<i>Non-metastatic</i>	1.58	1.12 - 2.13	
<i>Metastatic</i>	2.54	1.95 - 3.31	



**Supplementary table S6. Multivariable Cox regression analysis of major adverse kidney events within the first year in hospitalised adults with acute kidney injury at a single centre between 2012 and 2016, following imputation of missing albuminuria data.**

	<b>Hazard Ratio</b>	<b>95% Confidence Interval</b>	<b>P value</b>
<b>Age, per decade</b>	1.16	1.10 - 1.24	<0.001
<b>Acute kidney injury stage</b>			
<i>Stage 1</i>	(ref)		<0.001
<i>Stage 2</i>	1.37	1.16 - 1.63	
<i>Stage 3</i>	1.61	1.30 - 2.00	
<b>Discharge creatinine, per 10 µmol/L</b>	1.04	1.03 - 1.06	<0.001
<b>Length of stay, per 10 days</b>	1.02	0.99 - 1.06	0.23
<b>Chronic heart failure</b>	1.42	1.20 - 1.68	<0.001
<b>Liver disease</b>	1.67	1.38 - 2.02	<0.001
<b>Haematological disease</b>			
<i>Nil</i>	(ref)		
<i>Leukaemia</i>	1.30	0.89 - 1.89	
<i>Lymphoma</i>	0.80	0.20 - 3.25	
<b>Malignancy</b>			
<i>Nil</i>	(ref)		<0.001
<i>Non-metastatic</i>	1.43	1.13 - 1.81	
<i>Metastatic</i>	2.28	1.82 - 2.86	
<b>Albuminuria</b>			
<i>None</i>	(ref)		
<i>Mild</i>	0.89	0.69 - 1.13	
<i>Moderate to heavy</i>	0.89	0.62 - 1.26	

**Supplementary table S7. Multivariable Cox regression analysis of major adverse kidney events within the first year in hospitalised adults with acute kidney injury at a single centre between 2012 and 2016, assuming all patients with a final eGFR measurement <25% of baseline (without evidence of being sustained for 3 months) had CKD.**

	<b>Hazard Ratio</b>	<b>95% Confidence Interval</b>	<b>P value</b>
<b>Age, per decade</b>	1.16	1.09 - 1.23	<0.001
<b>Acute kidney injury stage</b>			
<i>Stage 1</i>	(ref)		<0.001
<i>Stage 2</i>	1.45	1.23 - 1.70	
<i>Stage 3</i>	1.68	1.37 - 2.06	
<b>Discharge creatinine, per 10 µmol/L</b>	1.04	1.03 - 1.05	<0.001
<b>Length of stay, per 10 days</b>	1.02	0.99 - 1.06	0.15
<b>Chronic heart failure</b>	1.33	1.14 - 1.57	<0.001
<b>Liver disease</b>	1.51	1.25 - 1.82	<0.001
<b>Haematological disease</b>			
<i>Nil</i>	(ref)		0.32
<i>Leukaemia</i>	1.32	0.92 - 1.90	
<i>Lymphoma</i>	1.08	0.34 - 3.42	
<b>Malignancy</b>			
<i>Nil</i>	(ref)		<0.001
<i>Non-metastatic</i>	1.31	1.04 - 1.65	
<i>Metastatic</i>	2.00	1.60 - 2.49	