

## ADDITIONAL FILES

### Table of contents

**Additional File 1: Figure S1:** Kaplan-Meier survival curve comparing post-AKI survival according to AKI category.

**Additional File 2: Table S1:** Patients' recovery status at 7- and 90-days post-AKI (%)

**Additional File 3: Table S2:** Characteristics of patients with community-acquired/community-managed AKI tested versus untested within the first seven days post AKI diagnosis.

**Additional File 4: Table S3:** 90-day status of patients untested within the first 7 days post AKI diagnosis.

**Additional File 5: Figure S2:** Forest plot displaying the association between individual predictors and progression to AKD, excluding patients who died or initiated chronic KRT within the first 7 days.

**Additional File 6: Table S4:** Results of univariable and multivariable logistic regression assessing the association between individual predictors and non-recovery at day 7, including patients who died or initiated chronic KRT within the first 7 days in the non-recovery group.

**Additional File 6: Figure S3:** Forest plot displaying the association between individual predictors and non-recovery at day 7, including patients who died or initiated chronic KRT within the first 7 days in the non-recovery group.

**Additional File 7: Figure S4:** Forest plot displaying the association between individual predictors and non-recovery at day 90 in patients who entered the AKD phase, excluding patients who died or initiated chronic KRT between day 8 and day 90.

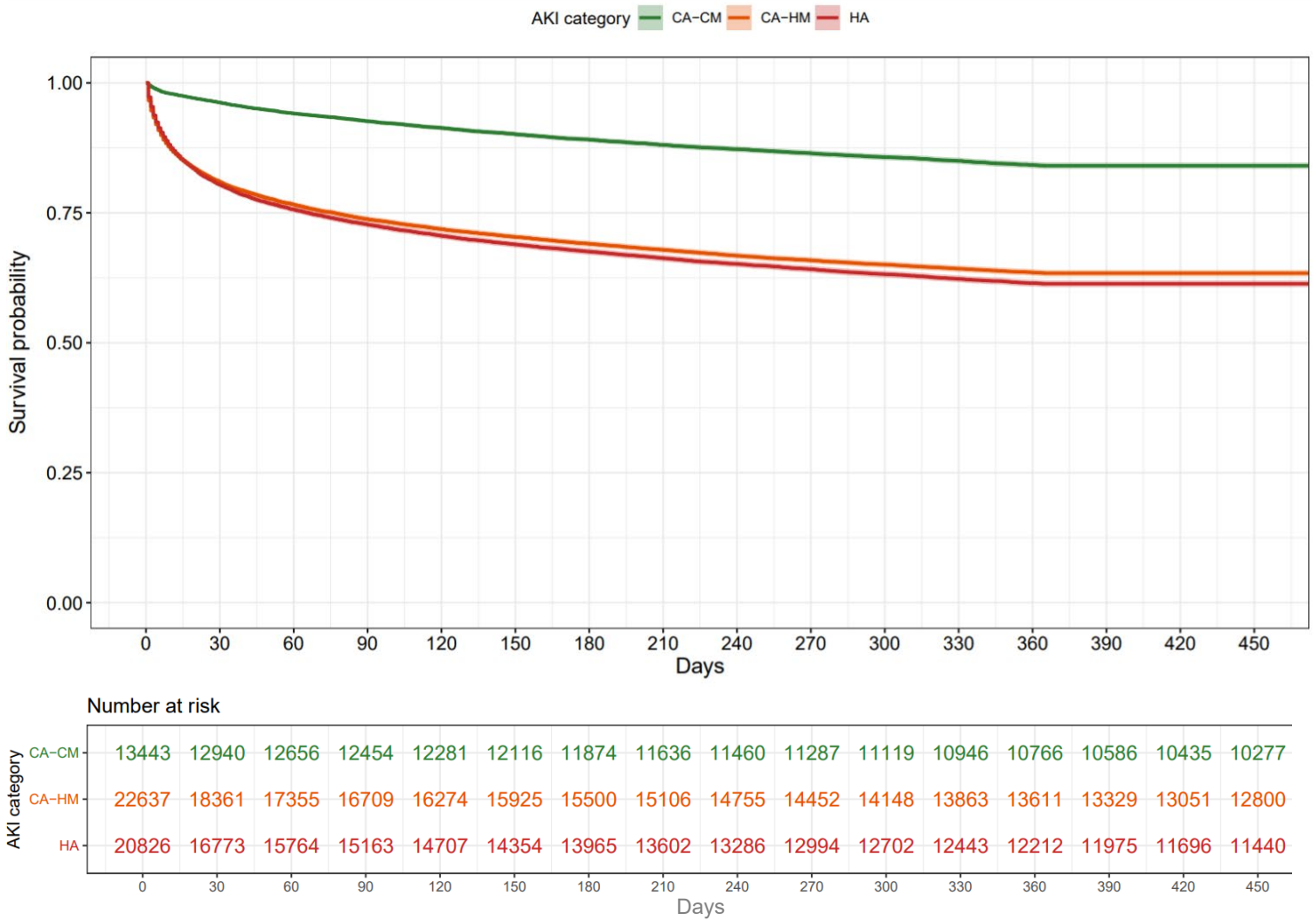
**Additional Files 8: Table S5:** Results of univariable and multivariable logistic regression assessing the association between individual predictors and non-recovery at day 90 in patients who entered the AKD phase, including patients who died or initiated chronic KRT between day 8 and day 90 in the non-recovery group.

**Additional File 8: Figure S5:** Forest plot the association between individual predictors and non-recovery at day 90 in patients who entered the AKD phase, including patients who died or initiated chronic KRT between day 8 and day 90 in the non-recovery group.

**Additional File 9: Figure S6:** Correlation matrix displaying the strength of association between pairs of candidate risk factors.

**Additional File 10: Table S6:** Association between progression to AKD (versus early recovery) and subsequent risk of death or development of *de novo* CKD within the year following the AKI episode (results of multivariable Cox model).

**Figure S1:** Kaplan-Meier survival curve comparing post-AKI survival according to AKI category (N=56,906).\*



\* CA-CM: Community-acquired/community-managed AKI; CA-HM: Community-acquired/hospital-managed AKI; HA: Hospital-acquired AKI

**Table S1:** Patients' recovery status at 7- and 90-days post-AKI (%)

	Creatinine-recovery	No creatinine-recovery	Death	KRT	Untested	Total
<b>Patients' status at day 7</b>						
<b>Community-acquired/community-managed AKI</b>						
Stage 1	1,231 (10.3)	2,276 (19.0)	145 (1.2)	<5*	8,332 (69.5)	11,984 (100)
Stage 2	140 (12.5)	425 (38.0)	63 (5.6)	<5*	490 (43.8)	1,118 (100)
Stage 3	27 (7.9)	124 (36.4)	35 (10.3)	<5*	151 (44.3)	341 (100)
All stages	1,398 (10.4)	2,825 (21.0)	243 (1.8)	<5*	8,973 (66.7)	13,443 (100)
<b>Community-acquired/hospital-managed AKI</b>						
Stage 1	7,624 (49.5)	4,605 (29.9)	1,370 (8.9)	<5*	1,785 (11.6)	15,385 (100)
Stage 2	2,035 (46.1)	1,589 (36.0)	640 (14.5)	<5*	148 (3.3)	4,412 (100)
Stage 3	986 (34.7)	1,333 (46.9)	475 (16.7)	18 (0.63)	28 (0.98)	2,840 (100)
All stages	10,645 (47.0)	7,527 (33.2)	2,485 (11.0)	19 (0.084)	1,961 (8.7)	22,637 (100)
<b>Hospital-acquired AKI</b>						
Stage 1	7,085 (39.4)	7,185 (39.9)	1,639 (9.1)	<5*	2,083 (11.6)	17,992 (100)
Stage 2	721 (34.8)	863 (41.7)	374 (18.1)	<5*	110 (5.3)	2,069 (100)
Stage 3	192 (25.1)	373 (48.8)	151 (19.7)	22 (2.9)	27 (3.5)	765 (100)
All stages	7,998 (38.4)	8,421 (40.4)	2,164 (10.4)	23 (0.11)	2,220 (10.7)	20,826 (100)
<b>All AKI</b>	<b>20,041 (35.2)</b>	<b>18,773 (33.0)</b>	<b>4,892 (8.6)</b>	<b>46 (0.081)</b>	<b>13,154 (23.1)</b>	<b>56,906 (100)</b>
<b>Patients' status at day 90</b>						
<b>Community-acquired/community-managed AKI</b>						
stage 1	993 (43.6)	673 (29.6)	191 (8.4)	<5*	417 (18.3)	2,276 (100)
stage 2	164 (38.6)	160 (37.6)	42 (9.9)	<5*	59 (13.9)	425 (100)
stage 3	37 (29.8)	54 (43.5)	14 (11.3)	17 (13.7)	<5*	124 (100)
All stages	1,194 (42.3)	887 (31.4)	247 (8.7)	19 (0.67)	478 (16.9)	2,825 (100)
<b>Community-acquired/hospital-managed AKI</b>						
Stage 1	1,999 (43.4)	981 (21.3)	968 (21.0)	10 (0.22)	647 (14.0)	4,605 (100)
Stage 2	668 (42.0)	383 (24.1)	384 (24.2)	<5*	150 (9.4)	1,589 (100)
Stage 3	582 (43.7)	363 (27.2)	290 (21.7)	56 (4.2)	42 (3.1)	1,333 (100)
All stages	3,249 (43.2)	1,727 (22.9)	1,642 (21.8)	70 (0.93)	839 (11.1)	7,527 (100)
<b>Hospital-acquired AKI</b>						
Stage 1	2,794 (38.9)	2,084 (29.0)	1,498 (20.8)	11 (0.15)	798 (11.1)	7,185 (100)
Stage 2	331 (38.3)	242 (28.0)	225 (26.1)	<5*	65 (7.5)	863 (100)
Stage 3	130 (34.8)	119 (31.9)	83 (22.2)	29 (7.8)	12 (3.2)	373 (100)
All stages	3,255 (38.6)	2,445 (29.0)	1,806 (21.4)	40 (0.47)	875 (10.4)	8,421 (100)
<b>All AKI</b>	<b>7,698 (41.0)</b>	<b>5,059 (26.9)</b>	<b>3,695<sup>†</sup> (19.7)</b>	<b>129<sup>a</sup> (0.69)</b>	<b>2,192 (11.7)</b>	<b>18,773<sup>‡</sup> (100)</b>

<sup>†</sup> 6 patients initiated KRT and then died during the 8 to 90 days period, their status was considered as "Death"

<sup>‡</sup> Patients who entered AKD phase, i.e: have been tested at day 7 but did not recover within 7 days, did not die or initiate RRT during first 7 days.

<sup>\*</sup> Count data below 5 are non-disclosable in order to protect patient's confidentiality.

**Table S2:** Characteristics of patients with community-acquired/community-managed AKI tested versus untested within the first seven days post AKI diagnosis, excluding patients who died or initiated chronic KRT within this time period.

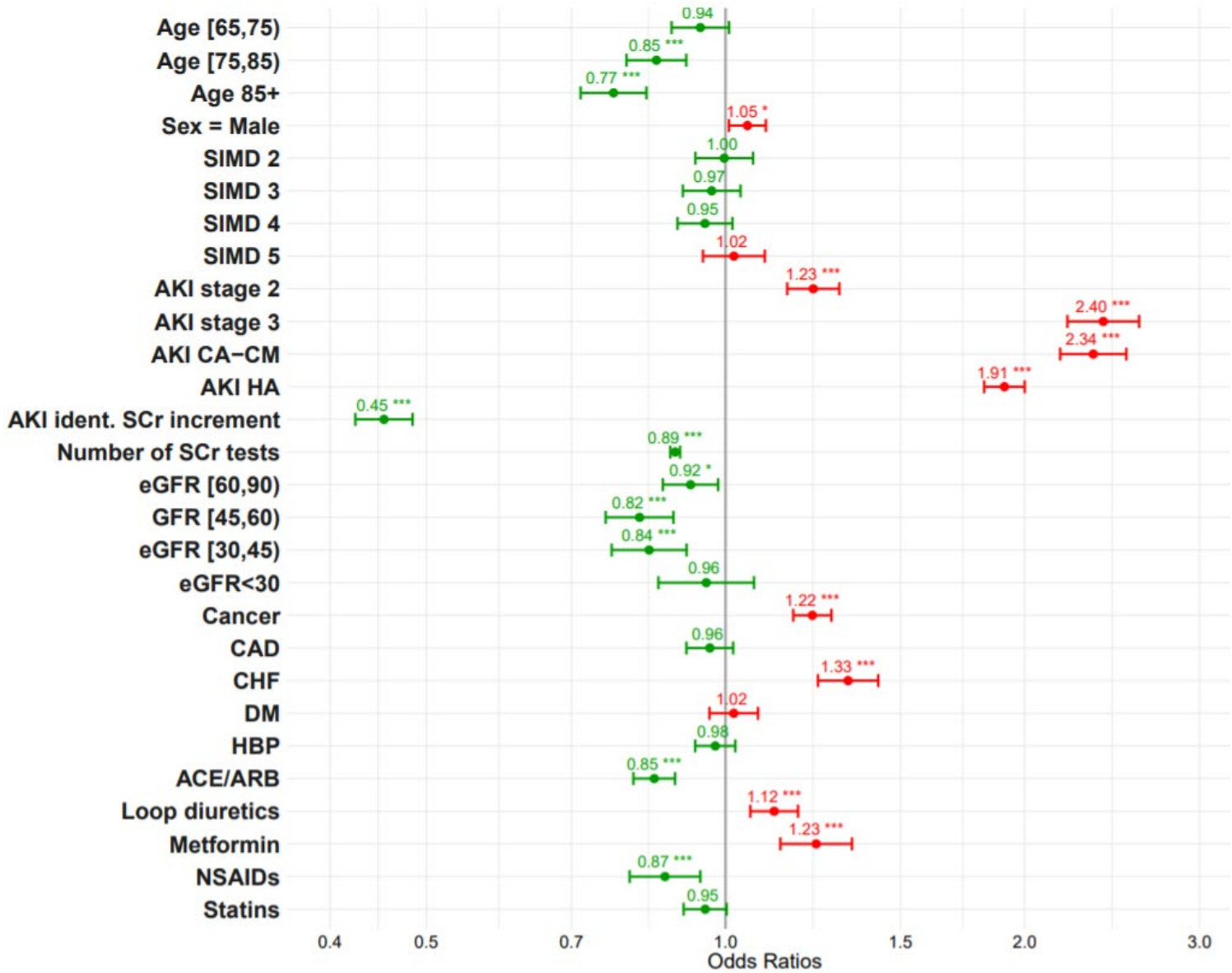
	<b>Tested (n=4,223)</b>	<b>Untested (n=8,973)</b>
<b>AKI severity at diagnosis</b>		
Stage 1	3507 (83)	8332 (93)
Stage 2	565 (13)	490 (5)
Stage 3	151 (4)	151 (2)
<b>Age at AKI diagnosis (median, [IQR])</b>	72 [57 – 82]	68 [50 – 79]
<b>Sex = Male</b>	4706 (37)	3049 (34)
<b>SIMD quintile</b>		
1 (most deprived)	753 (18)	1862 (21)
2	819 (19)	1856 (21)
3	815 (19)	1801 (20)
4	1130 (27)	2093 (23)
5 (least deprived)	706 (17)	1361 (15)
<b>AKI identified by</b>		
SCr ratio	4116 (97)	8856 (99)
SCr increment	107 (3)	117 (1)
<b>Baseline eGFR category</b>		
≥ 90	1229 (29)	4223 (47)
60 – 89	1494 (35)	2894 (32)
45 – 59	730 (17)	978 (11)
30 – 44	551 (13)	630 (7)
< 30	219 (5)	248 (3)
<b>Comorbidity</b>		
Chronic kidney disease (CKD)	1603 (38)	2346 (26)
Cancer	1159 (27)	2117 (24)
Coronary arterial disease (CAD)	865 (20)	1569 (17)
Congestive heart failure (CHF)	440 (10)	726 (8)
Diabetes	1133 (27)	2266 (26)
Hypertension	1361 (32)	2469 (27)
<b>Medication in prior 90 days</b>		
ACEi/ARB	1821 (43)	3313 (37)
Loop diuretic	1129 (27)	1914 (21)
Metformin	464 (11)	949 (11)
NSAID	328 (8)	846 (9)
Statin	1537 (36)	2933 (33)

**Table S3:** 90-day status of patients untested within the first 7 days post AKI diagnosis.

	<b>Creatinine-recovery</b>	<b>No creatinine-recovery</b>	<b>Death</b>	<b>KRT</b>	<b>Untested</b>	<b>Total</b>
<b>Patients' status at day 90 for patients untested at day 7</b>						
<b>Community-acquired/community-managed AKI</b>						
Stage 1	2,656 (31.9)	2,185 (26.2)	364 (4.4)	<5*	3,124 (37.5)	8,332 (100)
Stage 2	145 (29.6)	179 (36.5)	44 (9.0)	<5*	119 (24.3)	490 (100)
Stage 3	32 (21.2)	56 (37.1)	26 (17.2)	19 (12.6)	18 (11.9)	151 (100)
All stages	2,833 (31.6)	2,420 (27.0)	434 (4.8)	25 (0.3)	3,261 (36.3)	8,973 (100)
<b>Community-acquired/hospital-managed AKI</b>						
Stage 1	664 (37.2)	295 (16.5)	145 (8.1)	<5*	681 (38.1)	1,785 (100)
Stage 2	52 (35.1)	17 (11.5)	21 (14.2)	<5*	58 (39.2)	148 (100)
Stage 3	7 (25.0)	5 (17.9)	5 (17.9)	<5*	7 (25.0)	28 (100)
All stages	723 (36.9)	317 (16.2)	171 (8.7)	<5*	746 (38.0)	1,961 (100)
<b>Hospital-acquired AKI</b>						
Stage 1	714 (34.3)	445 (21.4)	210 (10.1)	<5*	714 (34.3)	2,083 (100)
Stage 2	29 (26.4)	17 (15.4)	24 (21.8)	<5*	40 (36.4)	110 (100)
Stage 3	7 (25.9)	4 (14.8)	8 (29.6)	<5*	5 (18.5)	27 (100)
All stages	750 (33.8)	466 (21.0)	242 (10.9)	<5*	759 (34.2)	2,220 (100)
<b>All AKI</b>	<b>4,306 (32.7)</b>	<b>3,203 (24.3)</b>	<b>847 (6.4)</b>	<b>32 (0.24)</b>	<b>4,766 (36.2)</b>	<b>13,154 (100)</b>

\*Count data below 5 are non-disclosable to protect patients' confidentiality.

**Figure S2:** Forest plot displaying the results of multivariable logistic regression assessing the association between individual predictors and progression to AKD, excluding patients who died or initiated chronic KRT within the first 7 days.<sup>§</sup>



<sup>§</sup> Variables associated with progression to AKD are in red whilst those associated with early recovery are in green. Significance level: \* <0.05, \*\*<0.01, \*\*\* <0.001

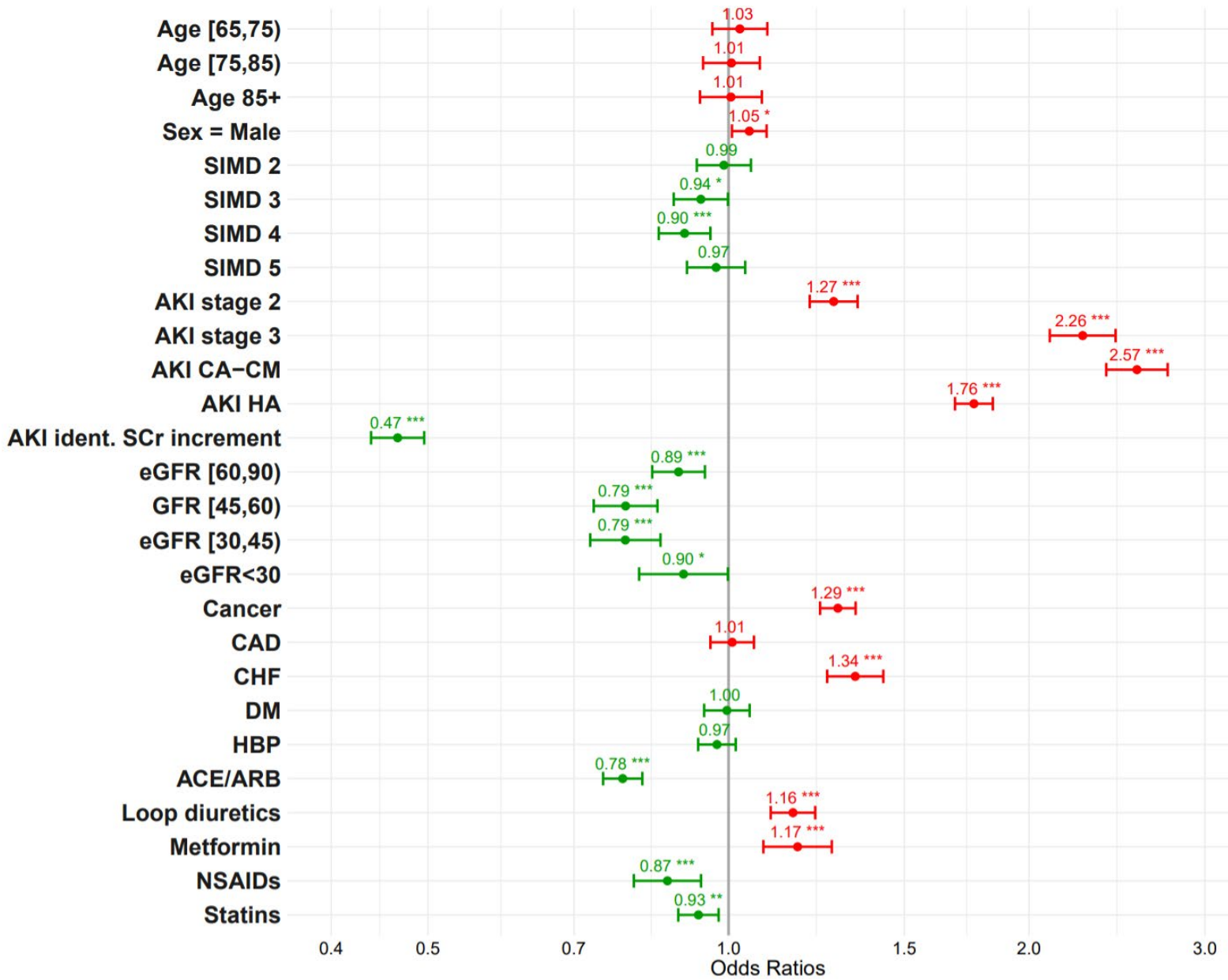
**Table S4:** Results of univariable and multivariable logistic regression assessing the association between individual predictors and non-recovery at day 7, including patients who died or initiated chronic KRT within the first 7 days in the non-recovery group.

	N	Unadjusted		Adjusted	
		OR (95% CI)	p-value	OR (95% CI)	p-value
	43,752			43,752	
<b>No recovery at day 7, N (%)</b>		23,711 (54.2%)		23,711 (54.2%)	
<b>Age at AKI diagnosis</b>					
<65 (Ref)	11,075	--	--	--	--
65-74	9,949	0.94 (0.89 – 1.00)	0.04	1.00 (0.94 – 1.07)	0.42
75-84	13,520	0.86 (0.82 – 0.91)	<0.001	1.00 (0.94 – 1.06)	0.84
85+	9,208	0.86 (0.82 – 0.91)	<0.001	0.99 (0.92 – 1.06)	0.88
<b>Sex = Male</b>	20,995	0.98 (0.95 - 1.02)	0.36	1.05 (1.01 – 1.09)	0.02
<b>SIMD quintile</b>					
1 (Ref)	8,172	--	--	--	--
2	8,773	0.99 (0.93 – 1.05)	0.64	0.99 (0.93 – 1.05)	0.74
3	8,743	0.94 (0.88 – 0.99)	0.03	0.94 (0.88 – 1.00)	0.04
4	11,201	0.91 (0.86 to 0.97)	0.002	0.90 (0.85 – 0.96)	<0.001
5	6,863	0.98 (0.92 – 1.04)	0.51	0.97 (0.91 – 1.04)	0.4
<b>AKI category</b>					
CA-HM (Ref)	20,676	--	--	--	--
CA-CM	4,470	2.33 (2.18 – 2.50)	<0.001	2.56 (2.39 – 2.75)	<0.001
HA	18,606	1.41 (1.35 – 1.46)	<0.001	1.76 (1.69 – 1.84)	<0.001
<b>AKI identified by</b>					
SCr ratio (Ref)	37,410	--	--	--	--
SCr increment	6,342	0.43 (0.40 - 0.46)	<0.001	0.47 (0.44 – 0.49)	<0.001
<b>AKI severity at diagnosis</b>					

Stage 1 (Ref)	33,161	--	--	--	--
Stage 2	6,851	1.26 (1.20 - 1.33)	<0.001	1.27 (1.21 - 1.35)	<0.001
Stage 3	3,740	1.95 (1.81 - 2.09)	<0.001	2.26 (2.10 - 2.44)	<0.001
<b>Number of tests</b>		0.81 (0.81 - 0.82)	<0.001	--	--
<b>Baseline eGFR category</b>					
≥ 90 (Ref)	9,918	--	--	--	--
60 - 89	17,175	0.84 (0.80 - 0.88)	<0.001	0.89 (0.84 - 0.95)	<0.001
45 - 59	7,913	0.71 (0.67 - 0.75)	<0.001	0.79 (0.74 - 0.85)	<0.001
30 - 44	6,007	0.68 (0.64 - 0.72)	<0.001	0.79 (0.73 - 0.86)	<0.001
< 30	2,739	0.79 (0.73 - 0.86)	<0.001	0.90 (0.82 - 1.00)	0.05
<b>Comorbidity</b>					
Cancer	15,778	1.25 (1.21 - 1.30)	<0.001	1.29 (1.24 - 1.34)	<0.001
CAD	11,271	0.96 (0.92 - 1.00)	0.05	1.01 (0.96 - 1.06)	0.74
CHF	5,685	1.22 (1.15 - 1.29)	<0.001	1.34 (1.25 - 1.43)	<0.001
Diabetes	11,992	0.97 (0.93 - 1.01)	0.12	1.00 (0.94 - 1.05)	0.89
Hypertension	16,843	0.91 (0.88 - 0.95)	<0.001	0.97 (0.93 - 1.02)	0.23
<b>Medication in prior 90 days</b>					
ACEi/ARB	16,190	0.78 (0.75 - 0.81)	<0.001	0.78 (0.75 - 0.82)	<0.001
Loop diuretic	9,973	1.08 (1.04 - 1.13)	<0.001	1.16 (1.10 - 1.22)	<0.001
Metformin	4,232	1.04 (0.98 - 1.11)	0.19	1.17 (1.08 - 1.27)	<0.001
NSAID	2,981	0.91 (0.85 - 0.97)	0.016	0.87 (0.80 - 0.94)	<0.001
Statin	15,931	0.85 (0.82 - 0.89)	<0.001	0.93 (0.89 - 0.98)	0.003

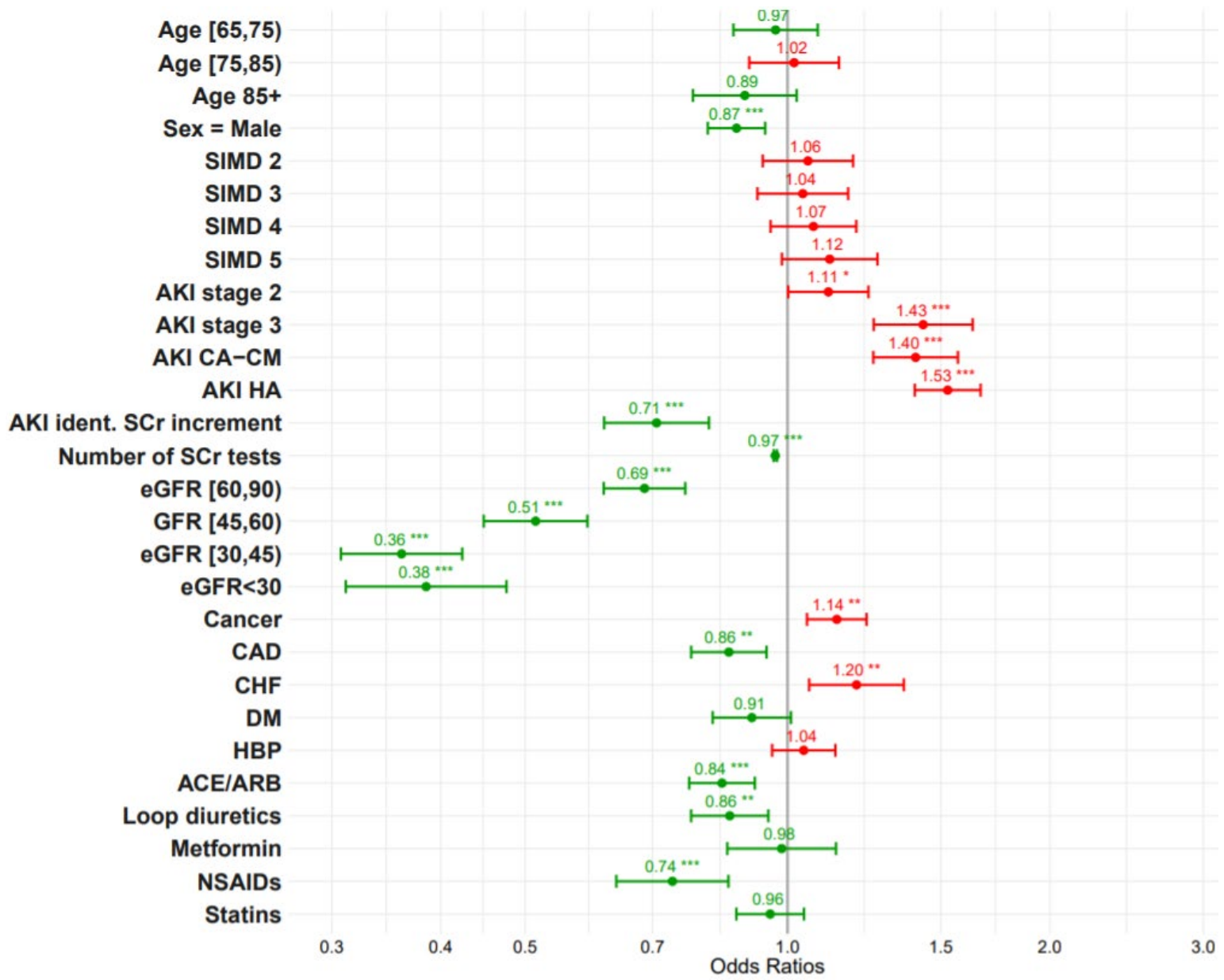


**Figure S3:** Forest plot displaying the results of multivariable logistic regression assessing the association between individual predictors and non-recovery at day 7, including patients who died or initiated chronic KRT within the first 7 days in the non-recovery group. \*\*



\*\*Variables associated with non-recovery at day 7 are in red whilst those associated with early recovery (between day 1 and day 7) are in green. Significance level: \* <0.05, \*\*<0.01, \*\*\* <0.001.

**Figure S4:** Forest plot displaying the results of multivariable logistic regression assessing the association between individual predictors and non-recovery at day 90 in patients who entered the AKD phase, excluding patients who died or initiated chronic KRT between day 8 and day 90. <sup>††</sup>



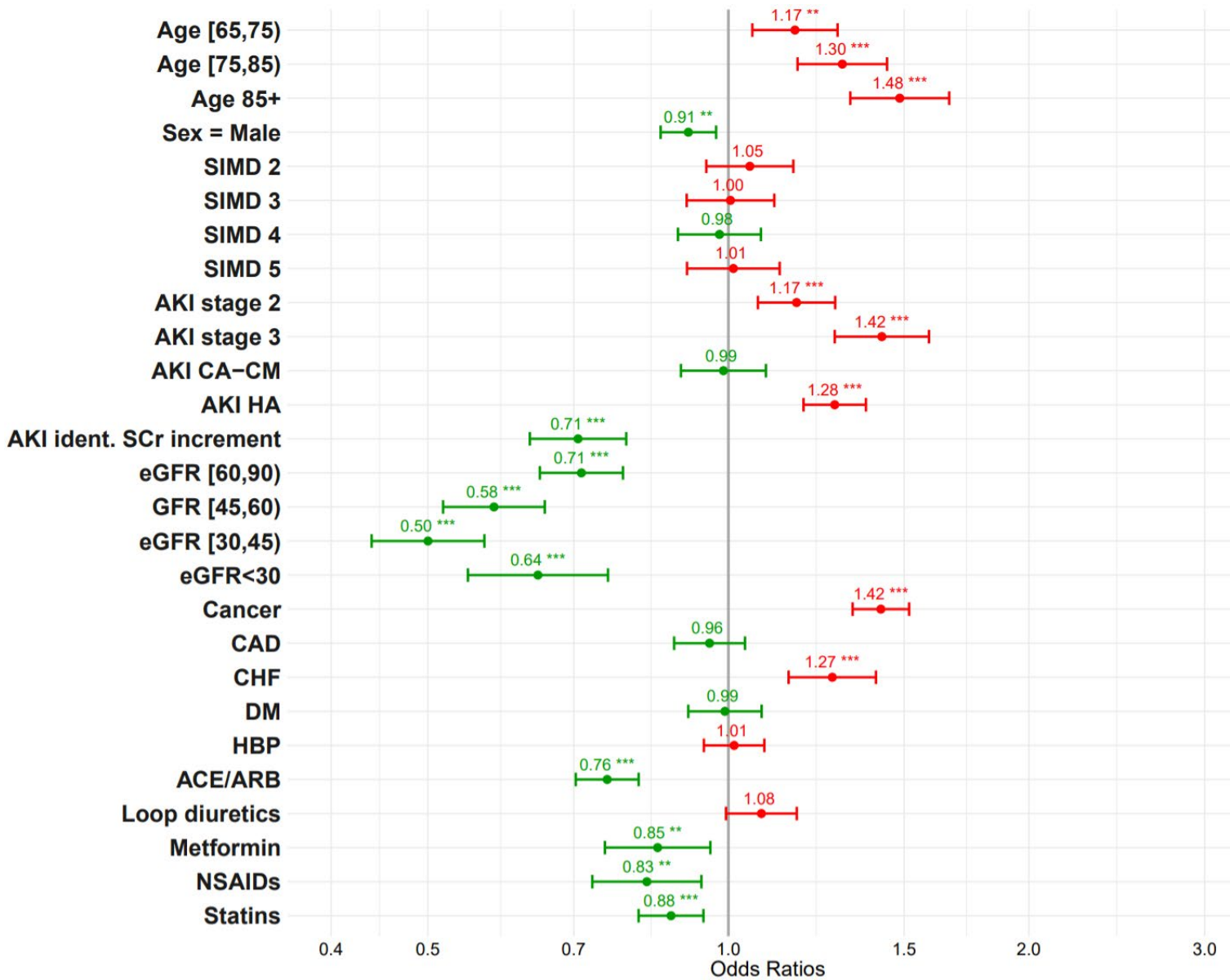
<sup>††</sup> Variables associated with non-recovery at day 90 are in red whilst those associated with recovery during the AKD phase (between day 8 and day 90) are in green. Significance level: \* <0.05, \*\* <0.01, \*\*\* <0.001.

**Table S5:** Results of univariable and multivariable logistic regression assessing the association between individual predictors and non-recovery at day 90 in patients who entered the AKD phase, including patients who died or initiated chronic KRT between day 8 and day 90 in the non-recovery group.

	N	Unadjusted		Adjusted	
		OR (95% CI)	p-value	OR (95% CI)	p-value
	16,581			16,581	
<b>No recovery at day 90, N (%)</b>		8,883 (53.6%)		8,883 (53.6%)	
<b>Age at AKI diagnosis</b>					
<65 (Ref)	4,161	--	--	--	--
65-74	3,832	0.95 (0.87 – 1.04)	0.2	1.17 (1.06-1.29)	0.002
75-84	4,986	0.94 (0.87 – 1.02)	0.1	1.30 (1.17-1.44)	<0.001
85+	3,602	1.09 (1.00 – 1.20)	0.05	1.48 (1.32-1.66)	<0.001
<b>Sex = Male</b>	7,975	0.89 (0.83 – 0.94)	<0.001	0.91 (0.86-0.97)	0.005
<b>SIMD quintile</b>					
1 (Ref)	3,094	--	--	--	--
2	3,312	1.05 (0.95 – 1.16)	0.3	1.05 (0.95-1.16)	0.3
3	3,259	1.01 (0.91 – 1.11)	0.8	1.00 (0.91-1.11)	0.9
4	4,233	1.01 (0.92 – 1.11)	0.8	0.98 (0.89-1.08)	0.7
5	2,683	1.06 (0.96 – 1.18)	0.3	1.01 (0.91-1.13)	0.8
<b>AKI category</b>					
CA-HM (Ref)	6,688	--	--	--	--
CA-CM	2,347	0.91 (0.83 – 1.00)	0.06	0.99 (0.90-1.09)	0.8
HA	7,546	1.24 (1.17 – 1.33)	<0.001	1.28 (1.19-1.37)	<0.001
<b>AKI identified by</b>					
SCr ratio (Ref)	14,880	--	--	--	--
SCr increment	1,701	0.69 (0.63 - 0.77)	<0.001	0.71 (0.63-0.79)	<0.001
<b>AKI severity at diagnosis</b>					

Stage 1 (Ref)	12,204	--	--	--	--
Stage 2	2,603	1.12 (1.02 - 1.21)	0.01	1.17 (1.07-1.28)	<0.001
Stage 3	1,774	1.23 (1.11 – 1.36)	<0.001	1.42 (1.28-1.59)	<0.001
<b>Number of tests</b>	Median = 5 [IQR: 2 – 11]	0.97 (0.97 – 0.98)	<0.001	--	--
<b>Baseline eGFR category</b>					
≥ 90 (Ref)	3,923	--	--	--	--
60 – 89	6,621	0.79 (0.73 - 0.86)	<0.001	0.71 (0.65-0.78)	0.01
45 – 59	2,851	0.65 (0.59 - 0.72)	<0.001	0.58 (0.52-0.65)	<0.001
30 – 44	2,144	0.57 (0.51 - 0.63)	<0.001	0.50 (0.44-0.57)	<0.001
< 30	1,042	0.76 (0.66 – 0.87)	<0.001	0.64 (0.55-0.76)	0.4
<b>Comorbidity</b>					
Cancer	6,311	1.44 (1.35 - 1.53)	<0.001	1.42 (1.33-1.52)	<0.001
CAD	4,211	0.89 (0.83 – 0.95)	<0.001	0.96 (0.88-1.04)	0.3
CHF	2,361	1.09 (1.00 - 1.19)	0.06	1.27 (1.15-1.41)	<0.001
Diabetes	4,789	0.79 (0.74 – 0.85)	<0.001	0.99 (0.91-1.08)	0.8
Hypertension	6,376	0.91 (0.85 – 0.97)	0.003	1.01 (0.95-1.09)	0.7
<b>Medication in prior 90 days</b>					
ACEi/ARB	6,201	0.65 (0.61 - 0.70)	<0.001	0.76 (0.70-0.81)	<0.001
Loop diuretic	3,968	0.94 (0.87 - 1.00)	0.07	1.08 (0.99-1.17)	0.07
Metformin	1,827	0.68 (0.62 – 0.75)	<0.001	0.85 (0.75-0.96)	0.009
NSAID	1,110	0.85 (0.75 – 0.96)	0.008	0.83 (0.73-0.94)	0.003
Statin	6,033	0.72 (0.68 - 0.77)	<0.001	0.88 (0.81-0.94)	<0.001

**Figure S5:** Forest plot displaying the results of multivariable logistic regression assessing the association between individual predictors and non-recovery at day 90 in patients who entered the AKD phase, including patients who died or initiated chronic KRT between day 8 and day 90 in the non-recovery group. <sup>††</sup>



<sup>††</sup> Variables associated with non-recovery at day 90 are in red whilst those associated with recovery during the AKD phase (between day 8 and day 90) are in green. Significance level: \* <0.05, \*\*<0.01, \*\*\* <0.001.



**Table S6:** Association between progression to AKD (versus early recovery) and subsequent risk of death or development of *de novo* CKD within the year following the AKI episode (results of multivariable Cox model).

	N	HR for 1-year mortality <sup>§§</sup>	N	HR for 1-year risk of <i>de novo</i> CKD <sup>††</sup>
<b>All</b>	29,330	1.20 (1.13 to 1.26)	14,486	2.21 (1.91 to 2.57)
<b>CA-CM</b>	2,682	1.55 (1.23 to 1.95)	1,334	3.25 (1.99 to 5.31)
<b>CA-HM</b>	14,624	1.28 (1.18 to 1.39)	7,890	2.12 (1.72 to 2.60)
<b>HA</b>	12,024	1.14 (1.06 to 1.24)	5,262	2.00 (1.57 to 2.55)

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<sup>§§</sup> Adjusted for all baseline covariates (age, sex, SIMD, baseline eGFR, comorbidities and previous medications), frequency of SCr tests, AKI stage and recovery eGFR category (+AKI category when pooling all categories together).

