

Supplementary Table 1. Hazard ratios and 95% confidence intervals for the incidence of hospitalization for heart failure

First exam	Second exam	Category of changes in DKD phenotype	Proteinuria change	Number (%)	No. of event	Follow-up duration, PY	IR, /1,000 PY	Hazard ratios (95% CI)			
								Model 1	Model 2	Model 3	Model 4
Group 1 (n=1,234,452; 91.9%)	Group 1	1→1	No	1,132,531 (91.7)	4,479	7,442,340.18	0.60	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
	Group 2	1→2	New-onset	39,584 (3.2)	425	251,480.05	1.69	2.83 (2.57–3.13)	2.57 (2.32–2.83)	2.37 (2.14–2.61)	2.19 (1.98–2.42)
	Group 3	1→3	No	58,347 (4.7)	893	372,466.79	2.40	3.99 (3.72–4.29)	1.84 (1.71–1.98)	1.67 (1.55–1.80)	1.55 (1.44–1.67)
	Group 4	1→4	New-onset	3,990 (0.3)	116	24,311.15	4.77	8.03 (6.68–9.66)	3.95 (3.28–4.75)	3.22 (2.68–3.88)	2.76 (2.30–3.33)
Group 2 (n=63,849; 4.8%)	Group 1	2→1	Regressive	41,799 (65.5)	321	268,379.52	1.20	2.00 (1.79–2.24)	1.85 (1.66–2.08)	1.72 (1.53–1.92)	1.63 (1.46–1.83)
	Group 2	2→2	Persistent	15,619 (24.5)	257	97,501.59	2.64	4.45 (3.92–5.05)	4.12 (3.63–4.67)	3.60 (3.17–4.08)	3.10 (2.73–3.52)
	Group 3	2→3	Regressive	3,523 (5.5)	91	21,570.34	4.22	7.11 (5.77–8.74)	3.35 (2.72–4.13)	2.86 (2.32–3.52)	2.36 (1.92–2.91)
	Group 4	2→4	Persistent	2,908 (4.6)	87	17,151.1	5.07	8.67 (7.01–10.72)	5.46 (4.42–6.75)	4.63 (3.74–5.72)	3.44 (2.77–4.25)
Group 3 (n=44,815; 3.3%)	Group 3	3→3	No	40,963 (91.4)	1,045	252,424.83	4.14	6.96 (6.51–7.45)	2.45 (2.29–2.63)	2.09 (1.95–2.24)	1.86 (1.73–1.99)
	Group 4	3→4	New-onset	3,852 (8.6)	160	22,378.26	7.15	12.22 (10.43–14.3)	4.73 (4.04–5.54)	3.76 (3.20–4.40)	3.04 (2.59–3.56)

Model 1: non-adjusted; Model 2: adjusted for age, sex, body mass index (BMI), smoking, drinking, physical activity; Model 3: adjusted for age, sex, BMI, smoking, drinking, physical activity, hypertension, dyslipidemia, atrial fibrillation, ischemic heart disease; Model 4: Adjusted for age, sex, BMI, smoking, drinking, physical activity, hypertension, dyslipidemia, atrial fibrillation, ischemic heart disease, fasting glucose, diabetes duration, hemoglobin level, insulin usage.

DKD, diabetic kidney disease; PY, person-year; IR, incidence rate; CI, confidence interval.