

Supplementary Table 4. Hazard ratios and 95% confidence intervals for the incidence of hospitalization for heart failure (sensitivity analysis)

First exam	Second exam	Category of changes in DKD phenotype	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=1,274,938; 94.7%)	Group 1	1→1	1,193,590 (93.6)	4,975	7,832,788.53	0.64	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
	Group 2	1→2	15,637 (1.2)	248	98,651.83	2.51	3.99 (3.52–4.54)	3.54 (3.12–4.03)	3.21 (2.82–3.65)	2.85 (2.51–3.24)
	Group 3	1→3	63,530 (5.0)	1,004	404,461.35	2.48	3.92 (3.66–4.19)	1.83 (1.70–1.96)	1.65 (1.54–1.77)	1.53 (1.42–1.64)
	Group 4	1→4	2,181 (0.2)	80	12,900.24	6.20	9.95 (7.98–12.41)	5.42 (4.35–6.76)	4.55 (3.64–5.67)	3.61 (2.89–4.51)
Group 2 (n=23,363; 1.7%)	Group 1	2→1	15,522 (66.4)	168	98,829.47	1.70	2.7 (2.32–3.15)	2.53 (2.17–2.95)	2.23 (1.91–2.6)	2.05 (1.76–2.40)
	Group 2	2→2	4,784 (20.5)	91	29,431.51	3.09	4.96 (4.03–6.1)	4.71 (3.83–5.80)	4.05 (3.29–4.98)	3.37 (2.73–4.15)
	Group 3	2→3	1,814 (7.8)	55	10,897.44	5.05	8.1 (6.21–10.56)	4.16 (3.19–5.43)	3.66 (2.81–4.78)	2.84 (2.18–3.71)
	Group 4	2→4	1,243 (5.3)	48	7,240.36	6.63	10.8 (8.13–14.35)	7.45 (5.61–9.91)	6.23 (4.69–8.28)	4.25 (3.19–5.66)
Group 3 (n=48,469; 3.6%)	Group 3	3→3	46,124 (95.2)	1,251	283,104.13	4.42	7.05 (6.62–7.5)	2.52 (2.36–2.69)	2.14 (2.00–2.28)	1.88 (1.76–2.01)
	Group 4	3→4	2,345 (4.8)	98	13,409.25	7.31	11.88 (9.73–14.51)	5.05 (4.14–6.18)	3.84 (3.14–4.69)	3.10 (2.53–3.79)

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.