A

DKD phenotype change

Follow-up until December, 2018

First medical checkup

Second medical checkup
(Index date)

Clinical outcome
Hospitalization for heart failure

- G1: GFR^{nor}PU$^-$
- G2: GFR^{nor}PU$^+$
- G3: GFR^{low}PU$^-$

- G1: GFR^{nor}PU$^-$
- G2: GFR^{nor}PU$^+$
- G3: GFR^{low}PU$^-$
- G4: GFR^{low}PU$^+$

B

Individuals (aged ≥20 years) who had health examination provided by
Korean National Health Insurance Service between 2009 and 2012 (1st exam)
and had repeated health examination between 2011 and 2014 (2nd exam)
(n=1,779,819)

Index date was the date of 2nd exam between 2011 and 2014.

Individuals diagnosed with cancer (n=68,282)

Individuals diagnosed with thyrotoxicosis (n=78,467)

Individuals with renal diseases other then DKD
(n=135,698)

Individuals with rheumatic mitral valve disease (n=4,695)

Individuals with any missing values (n=48,959)

Individuals with cGFR <30 (n=14,889)

Individuals with eGFR <60 and PU$^+$ at 1st exam
or those transitioning from reduced eGFR to normal eGFR
(n=85,713)

1,343,116 were included

G1 (n=1,234,452)

G2 (n=63,849)

G3 (n=44,815)

◄ Grouping based on DKD phenotype at 1st exam

| G1→G1 (n=1,132,531) | G1→G2 (n=39,584) | G2→G1 (n=41,799) | G2→G2 (n=15,619) | G3→G3^a (n=40,963) | G3→G4^a (n=3,852) |

◄ Grouping based on DKD phenotype change

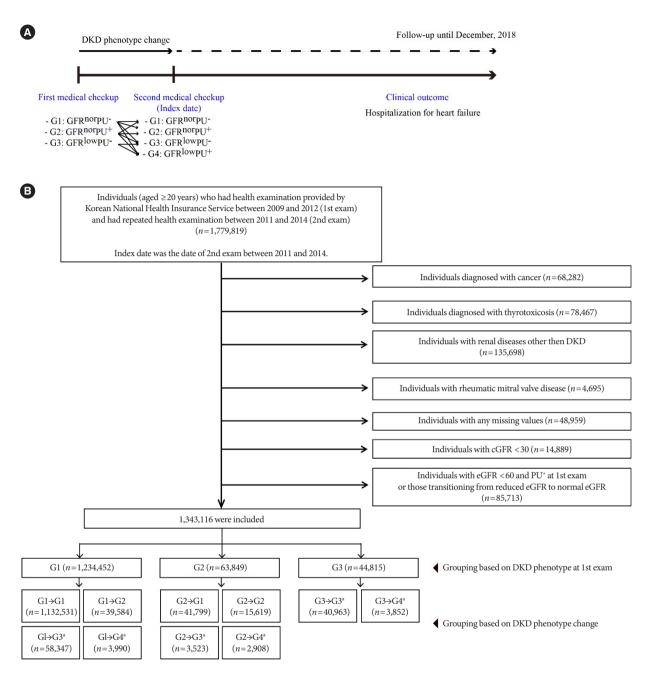| Gl→G3^a (n=58,347) | Gl→G4^a (n=3,990) | G2→G3^a (n=3,523) | G2→G4^a (n=2,908) |

Supplementary Fig. 1. Study overview. (A) Study design and (B) flow chart of study population. G1, estimated glomerular filtration rate (eGFR) ≥60 mL/min/1.73 m^2, proteinuria (PU)$^-$; G2, eGFR ≥60 mL/min/1.73 m^2, PU$^+$; G3, eGFR <60 mL/min/1.73 m^2, PU$^-$; G4, eGFR <60 mL/min/1.73 m^2, PU$^+$. DKD, diabetic kidney disease; GFR, glomerular filtration rate. ^{a}In case of group 3 and 4 at 2nd examination, only patients with eGFR 30 to 60 mL/min/1.73 m^2 were included according to the study inclusion criteria.