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# Prospective Follow-up of Diabetic Kidney Disease Progression in Newly Diagnosed Type 2 Diabetes: A Nationwide Cohort Study

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**Objectives :** Diabetes is a major cause of end-stage kidney disease (ESKD). However, the real-world incidence and progression of diabetic kidney disease (DKD) in newly diagnosed type 2 diabetes mellitus (T2DM) remain unclear. This study aimed to investigate composite kidney outcome in incident T2DM patients using a nationwide cohort.
**Methods :** This study included individuals aged ≥20 years who underwent health screening in 2012–2013, had no prior history of chronic kidney disease, and had at least three follow-up examinations. Patients newly diagnosed with T2DM in 2012–2013 were classified as cases, while controls were selected through 1:3 age- and sex-matching. T2DM was defined as at least two occurrences of ICD-10 codes E11–E14 within one year or these codes with a prescription for antidiabetic medication. The primary outcome was a composite kidney outcome: eGFR decline to <60 mL/min/1.73 m², new-onset proteinuria, or ESKD development.
**Results :** A total of 226,265 newly diagnosed T2DM patients and 678,795 matched controls were selected. The mean age was 56.4 ± 10.3 years, and 53.3% were female. Compared to controls, patients with T2DM had a higher prevalence of comorbidities and were more likely prescribed RAAS blockers (52.4% vs. 19.5%). Over a median follow-up of --- years, the primary outcome occurred in 10.7% of T2DM patients and 8.2% of controls (adjusted HR, 1.16; 95% CI, 1.15–1.18). The annual eGFR decline was significantly greater in T2DM patients but with a modest absolute difference (-0.038 mL/min/1.73m², P <0.001).
**Conclusions :** This study demonstrated that while the risk of DKD progression and ESKD occurence is elevated in newly diagnosed T2DM patients, kidney function remains preserved in a substantial proportion of these patients over time. Further research is warranted to account into account the heterogeneity of diabetes patients and relevant clinical factors.