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**Mildly to moderate impairment of renal function and cardiovascular or
kidney outcomes in an older population**

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Objectives : The incidence and prevalence of chronic kidney disease (CKD) are known to rise in an older population. However, the clinical relevance of the CKD definition (glomerular filtration rate [GFR] < 60 mL/min/1.73 m²) in older populations are yet to be determined. We investigated the cardiovascular and renal outcomes in older populations with mildly to moderately impaired renal function (GFR 45–59 mL/min/1.73 m²).

Methods : This retrospective cohort study using the Korean National Health Insurance Service database included 7,789,242 participants aged ≥ 40 years with estimated GFR (eGFR) ≥ 45 mL/min/1.73 m² in national health screening examination from 2012 to 2017. The risks of end-stage kidney disease (ESKD), cardiovascular disease (CVD), and all-cause death were analyzed using Cox regression hazard models.

Results : The participants with eGFR 45–59 mL/min/1.73 m² were 10.0% in the old (65–74 years) and 16.3% very old (75 ≥ years) groups. Mildly to moderate impairment of renal function was associated with a higher risk of ESKD, CVD, and all-cause death compared to normal kidney function of eGFR 60–89 mL/min/1.73 m² in the old and very old groups, regardless of proteinuria (adjusted hazard ratio [95% confidence interval] in the very old group without proteinuria: ESKD 3.048 [2.495–3.722], CVD 1.103 [1.066–1.142], and all-cause death 1.172 [1.144–1.201]).

Conclusions : Mildly to moderate impairment of renal function in the older population showed significant association with an increased risk of ESKD, CVD, and all-cause death, suggesting the necessity of adequate monitoring and treatment in the older population.