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## **Cardiovascular and mortality risks in young health screening examinees with marginal estimated glomerular filtration rate**

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**Objectives:** Additional evidence is necessary to interpret the kidney function parameters in young adults, particularly in those with marginal eGFR values.

**Methods:** We performed a nationwide retrospective cohort study using the health screening database of South Korea. We included young adults aged 20-39 years without a history of major cardiovascular events (MACE) or end-stage kidney disease who underwent a nationwide health screening in 2012. The study exposure was eGFR categorized into 15 mL/min/1.73 m<sup>2</sup> intervals, with a reference group and a main group of interest: < 30, 30-45, 45-60, 60-75, 75-90 (reference), 90-105, 105-120, and ≥ 120 mL/min/1.73 m<sup>2</sup>. The risks of all-cause mortality and MACE were calculated using Cox regression analysis adjusted for various clinicodemographic characteristics.

**Results:** In total, 3,132,409 young adults were included in this study. During a median follow-up of 7.3 years, marginal eGFR (60-75 mL/min/1.73 m<sup>2</sup>) was not significantly associated with a higher risk of all-cause mortality [adjusted HR 0.92 (0.86-0.99)]. The results were similarly identified for the MACE outcome [adjusted HR 1.01 (0.94-1.07)]. On the other hand, those with presence of albuminuria, even the marginal eGFR range was significantly associated with higher risks of all-cause mortality [adjusted HR 1.52 (1.01-1.29)] and ischemic stroke [adjusted HR 1.73 (1.10-2.74)].

**Conclusions:** Marginal eGFR alone was not associated with higher risks of all-cause mortality and MACE in general young adults. However, in those with albuminuria, the mortality risk was higher even in eGFR of 60-75 mL/min/1.73 m<sup>2</sup>.

Figure 1. Kaplan–Meier survival curve plotting the incidence probability of all-cause mortality and major adverse cardiovascular events according to eGFR.