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## A REVERSE J-SHAPE ASSOCIATION BETWEEN BODY MASS INDEX AND INCIDENT PROTEINURIA

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The nature of the relationship between body mass index (BMI) and incident proteinuria has not been reported yet. The goal of this study was to elucidate the nature of the relationship between BMI and incident proteinuria using nationwide health examination data. We investigated the relationship between BMI and incident proteinuria with the Korean national health screening data of 11,559,520 adults, who had undergone health screenings at least three times between 2009 and 2014 and were with eGFR 60 mL/min/1.73 m2 or above and normo-proteinuria at baseline. Proteinuria was defined as urine dipstick test for proteinuria 1+ or higher. A Cox proportional hazard model was used to analyse the relationship between BMI and incident proteinuria with the adjustment of possible confounding variables such as age, sex, fasting serum glucose, serum triglycerides, serum high-density lipoprotein-cholesterol, systolic blood pressure, known history of diabetes or hypertension medication, smoking status, regular alcohol consumption, and regular exercise at baseline. The nature of the relationship between BMI and incident proteinuria was visualized with a general additive model. A reverse J-shape association between BMI and the adjusted hazard ratio of incident proteinuria was observed. The nadir was between 22 and 23 kg/m2. With subgroup analyses, there was no difference according to sex and age (sex-specific median age; 44 in men, 49 in women). A reverse J-shape association between BMI and incident proteinuria with the nadir between 22 and 23 kg/m2. The clinical implications of this association need to be studied with future studies.

### Biography

Hyung-Jin Yoon is an associate professor in Department of Biomedical Engineering, College of Medicine, Seoul National University and a director of Division of Clinical Bioinformatics in Seoul National University Hospital Biomedical Research Institute. He received BA, MS, and PhD degree in Medicine from Seoul National University and trained as a renal physician in Seoul National University Hospital. His major research interests are health informatics, wearable sensor technology for quantified self and, clinical epidemiology including environmental and genetic epidemiology.

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