

## Screening for CKD in People Over 30 Years of Age Participating in Naqadeh IraPEN Program

Masudi Sima,<sup>1</sup> Taghizade-Afshari Ali,<sup>2</sup> Nourooz-Zadeh Jaffar,<sup>3</sup> Makhdoomi Khadijeh,<sup>3</sup> Niazkhani Zahra,<sup>2</sup> Khalkhali Hamidreza,<sup>4</sup> Nikibakhsh Ahmadali,<sup>5</sup> Motazakker Morteza<sup>6</sup>

<sup>1</sup>Department of Biostatistics and Epidemiology, School of Medicine, Urmia University of Medical Science, and Nephrology and Kidney Transplant Research Center, Urmia University of Medical Sciences, Urmia, Iran

<sup>2</sup>Nephrology and Kidney Transplant Research Center, Urmia University of Medical Sciences, Urmia, Iran

<sup>3</sup>Department of Clinical Biochemistry, Faculty of Medicine, Urmia University of Medical Sciences, Urmia, Iran

<sup>4</sup>Nephrology and Kidney Transplant Research Center, Urmia University of Medical Sciences, Patient Safety Research Center, Urmia University of Medical Sciences, Urmia, Iran

<sup>5</sup>Department of Pediatrics, Urmia University of Medical Sciences, Motaharri Hospital, Urmia, Iran

<sup>6</sup>Cellular and Molecular Research Center, Urmia University of Medical Sciences, Urmia, Iran

**Introduction.** CKD is one of the major health problems worldwide. The prevalence of CKD is projected to increase in the coming years. This study aimed to screen and determine the status of CKD in Naqadeh population over 30 years.

**Methods.** This cross-sectional study was conducted on population aged over 30 years who were cared for in Naqadeh IraPEN program. In the first phase, 3600 people were screened and in addition to the information collected in the IraPEN program, information on kidney disease history of the participants and their family was collected through interviews. Serum creatinine, glucose, hbA1c, urinary protein, and urinary albumin/creatinine ratio of the participants were determined. MDRD formula was used to calculate glomerular filtration rate.

**Results.** Of the screened 2141 (59.1%) were female. The mean (standard deviation) of participants' age were 49.9 (11.6) years. A History of hypertension and diabetes were reported by 24% and 7.7% of participants and 14% of them were smokers. In total, 14% had kidney stones, 1.8% had kidney cyst, 1.2% had kidney failure, 5.5% had protein in urine, and 7% had sugar in urine. Albumin to creatinine ratio between 30 to 300 and more than 300 were observed 10% and 1% of patients, respectively. In terms of stages of CKD, 8.7%, 63.7% 35.9% of the cases were in stage 1, stage 2, and stage 3; respectively. Only 0.5% was in stages 4 and 5. According to the CKD classification using GFR and albumin to creatinine ratio classes, 1.4% of participants were at high risk, 8.2% at high risk, and 33.1% at moderate risk for CKD.

**Conclusion.** The results showed that a significant proportion of the subjects in this study were at high risk and moderate risk for CKD. This study highlights the importance of screening programs, planning and implementing appropriate preventive and therapeutic measures to prevent CKD in the community.