

KIDNEY EARLY EVALUATION PROGRAM (KEEP) IN JAPAN

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We evaluated the adaptability to Japan of the US National Kidney Foundation's Kidney Early Evaluation Program (KEEP), developed to achieve earlier chronic kidney disease (CKD) detection in high-risk patients.

The International Kidney Evaluation Association Japan evaluated CKD in Japan, using the Japanese version (KEEP JAPAN). The 1065 participants had diabetes or hypertension, or fulfilled at least one original KEEP criterion (family history of diabetes, hypertension, or kidney disease). Mean age was 59.7 ± 16.0 years; 501 were men, and 564 were women.

Of participants, 26.9% had diagnosed or self-reported diabetes; 59.2% had diagnosed or self-reported hypertension (with an additional 21.5% diagnosed after the program); 16.9% had a history of diabetes and hypertension; and 30.6% had neither diabetes nor hypertension, but had a family history of diabetes, hypertension, or kidney disease. CKD (stages 1-4) prevalence was 26.7% defined by positive albumin-creatinine ratio (ACR) and estimated glomerular filtration rate (eGFR).

CKD prevalence in diabetic participants was 35.0%; relative risk vs. non-diabetic participants, 1.5; odds ratio 1.7. CKD prevalence in hypertensive participants was 34.8%; relative risk vs. non-hypertensive participants, 2.6; odds ratio, 3.4. Overall, 221 participants (20.8%) had CKD and cardiovascular disease (CVD), prevalence of 28.8%. Relative risk of CVD for CKD vs. non-CKD participants was 1.6; odds ratio, 1.9. Assessing only stage 3 CKD (prevalence 6.8%), the odds ratio increased to 2.2; CVD prevalence was also higher in this group. Of the 180 participants with history of diabetes and hypertension, 69 (38.3%) also had CVD. The rate was higher for participants with multiple risk factors.

CKD prevalence was high compared with the general Japanese population. The interaction between diabetes, hypertension, CVD, and CKD is an important public health concern. ACR measurement is essential for early CKD detection, both because incipient CKD can only be detected by medical examination and because CKD can progress rapidly to renal failure and CVD complications.