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## **Validation Study of the New International Risk Prediction Tool in Korean Patients with IgA Nephropathy**

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**Objectives:** Recently, a new international risk prediction tool in IgA nephropathy (IgAN) has been proposed. In this study, we aimed to test whether this prediction model could perform well in Korean patients with IgAN.

**Methods:** The data for 690 biopsy-proven IgAN patients were retrieved from the database of the glomerulonephritis registry of our institution from March 2003 to December 2017. Primary outcome was a composite of a 50% decline in estimated glomerular filtration rate (eGFR) or initiation of renal replacement therapy. A 5-year risk probability of the primary outcome was calculated using the proposed equation and patients were categorized into low, intermediate, higher, highest risk group according to percentiles of risk probability. We also constructed 3 prediction models using identical covariates in the previously published study as followings: clinical (mean arterial pressure [MAP], eGFR, and proteinuria), limited (clinical + the Oxford MEST), and full models (limited + use of RAS blockers and immunosuppression, and interaction term between proteinuria and each of following parameters: RAS blockers, T-score, and MAP.) without race. Then, the prediction performances of these models in Korean IgAN patients were evaluated using the by  $R^2_D$  measure, AIC, C-statistic, NRI, and IDI.

**Results:** During the median follow-up of 4 years, the primary outcome events occurred in 92 patients. The mean predicted 5-year risk of primary outcome was 6.6%. There were concomitant decreases in eGFR decline rates across these 4 groups. Kaplan-Meier analysis also showed that kidney outcome was significantly poor in higher predicted risk probability groups. The prediction performance of the limited model was not greater than that of the clinical model. However, the full model without race significantly improved all indexes of prediction performances compared with the clinical and limited models.

**Conclusions:** This study validated the clinical usefulness of the new international risk-prediction tool in Korean IgAN patients.