

Supplementary Table 3. Cross-validation of four logistic models for internal consistency of diabetic kidney diseases prevalent risk

Index	Index original	Training	Test	Optimism	Index corrected
Full model					
Dxy ^a	0.6909	0.6912	0.6937	-0.0026	0.6935
R ^{2b}	0.3602	0.3603	0.3958	-0.0354	0.3957
Slope	0	0	0.6397	-0.6397	0.6397
D	1	1	2.2288	-1.2288	2.2288
U	0	0	0.2328	0.2328	0.2328
Q	0.2260	0.2261	0.2265	-0.0005	0.2265
g	-0.0009	-0.0009	0.0048	-0.0057	0.0048
LBM1					
Dxy ^a	0.6297	0.6299	0.6215	0.0084	0.6214
R ^{2b}	0.2878	0.2879	0.3120	-0.0241	0.3119
Slope	0	0	0.0903	-0.0903	0.0903
D	1	1	1.1699	-0.1699	1.1699
U	0	0	0.0483	0.0483	0.0483
Q	0.1761	0.1762	0.1721	0.0042	0.1720
g	-0.0009	-0.0009	0.0010	-0.0019	0.0010
LBM2					
Dxy ^a	0.6342	0.6343	0.6251	0.0092	0.6250
R ^{2b}	0.2960	0.2962	0.3304	-0.0343	0.3303
Slope	0	0	0.1707	-0.1707	0.1707
D	1	1	1.1953	-0.1953	1.1953
U	0	0	0.0658	0.0658	0.0658
Q	0.1817	0.1818	0.1849	-0.0032	0.1849
g	-0.0009	-0.0009	0.0108	-0.0117	0.0108
Simplified model					
Dxy ^a	0.6166	0.6166	0.6169	-0.0002	0.6169
R ^{2b}	0.2713	0.2714	0.3156	-0.0442	0.3155
Slope	0	0	-0.1265	0.1265	-0.1265
D	1	1	1.6130	-0.6130	1.6130
U	0	0	0.1198	0.1198	0.1198
Q	0.1652	0.1652	0.1723	-0.0071	0.1722
g	-0.0009	-0.0009	0.0131	-0.0141	0.0132

LBM1, laboratory-based model 1; LBM2, laboratory-based model 2.

^aDxy means Somers' D_{xy} . When Y is binary, $D_{xy} = 2 \times (c - 0.5)$ where c is the concordance probability or area under the receiver operating characteristic curve, a linear translation of the Wilcoxon-Mann-Whitney statistic, ^b R^2 is mostly a measure of discrimination, and R^2_{adj} is a good overfitting-corrected measure, if the model is pre-specified. Estimating the relationship between the predicted probability and the observed outcome in calibration also leads to indexes of unreliability (U), discrimination (D), and overall quality ($Q = D - U$) which are derived from likelihood ratio tests. Q is a logarithmic scoring rule, which can be compared with Brier's index. The g-index is a new measure of a model's predictive discrimination, an interpretable, robust, and highly efficient measure of variation.