

S5 Table. Apparent hit rate and Estimated true hit rate in the estimation of operative easiness in HALapNx using different statistical methods for discrimination of hit rate and estimation of true hit rate

	NQDR	NLDR	3-NNR	5-NNR	FF	RBF	Logistic	Liner	average
Apparent hit rate	92.2%	97.4%	92.1%	88.9%	99.4%	95.3%	92.4%	86.6%	93.0 ± 4.2
Cross Validation	86.1%	94.8%	87.6%	88.8%	89.6%	91.9%	88.9%	86.6%	89.3 ± 2.9
simple Bootstrap	83.8%	94.4%	84.6%	79.6%	96.0%	92.5%	90.4%	84.8%	88.3 ± 5.9
Jack Knife Estimate	86.3%	94.9%	87.7%	88.8%	87.6%	91.5%	89.4%	84.0%	88.8 ± 3.3
Randomized Bootstrap	89.9%	96.9%	88.2%	86.3%	95.7%	91.5%	89.8%	85.1%	90.4 ± 4.2
.632 Estimator	88.6%	95.6%	89.4%	88.1%	92.6%	88.2%	90.9%	88.2%	90.2 ± 2.7
Average hit rate	86.9 ± 2.4	95.3 ± 1.0	87.5 ± 1.8	86.3 ± 3.9	92.3 ± 3.8	91.1 ± 1.8	89.9 ± 0.8	85.7 ± 1.7	

Calculations on this table were performed using a different cohort than the one in this article. Apparent hit rate is a discrimination rate of easy cases in HALapNx with the training data using different discriminators constructed with the training data itself. Other hit rates are estimated hit rates for future data by way of several estimation methods. The details of this kind of comparison of discriminators and estimators are written in the reference 30. by Efron, B.

NQDR: normal-based quadratic discriminant rule. NLDR: normal-based linear discriminant rule. 3-NNR: 3-nearest neighbourhood rule, 5-NN: 5-nearest neighbourhood rule, FF: feedforward neural network, RBF: radial basis function neural network, Logistic: logistic regression, Linear: linear regression, Cross Validation: Cross-validation method, simple Bootstrap: simple Randomized Bootstrap method, Jack Knife estimate: Jack Knife estimate of bias, .632 Estimator: .632(ϵ -err)