A NONPARAMETRIC ESTIMATE OF THE PARTIAL AREA
UNDER A RECEIVER OPERATING CHARACTERISTIC CURVE

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ABSTRACT

A nonparametric estimate of the partial area under the Receiver Operating Characteristic (ROC) curve is developed. This estimate is biased, and the bias depends on the nature of the underlying distributions, the sample sizes, and the chosen cut-off value. An optimal cut-off value is found, for which, regardless of other factors, the partial area estimate is approximately unbiased.

Keywords: sensitivity, specificity, bias, separator variable