A Procedure for Evaluating Predictive Accuracy of Biomarkers for Selecting Optimal Treatment

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Abstract

Among patients with the same clinical disease diagnosis, response to the same treatment is often quite heterogeneous. For many diseases this may be due to molecular heterogeneity of the disease itself, which may be measured via a biomarker. Due to this molecular heterogeneity, a molecularly targeted treatment may be effective for only a subset of patients. A biomarker that can predictive which patients would benefit from one particular treatment is called the predictive biomarker. In this talk, we introduce a new procedure to measure the predictive accuracy of a biomarker and discuss how to estimate this measure.