

**Generating Biosignatures to Differentiate
Specific Drug and Placebo Response in
Depression Trials**

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ABSTRACT

In precision medicine, a common goal in optimizing treatment assignment is to determine if any patient characteristics have different relationships with the outcome, depending on treatment. Such predictors produce non-zero interactions in regression models and are called "effect modifiers". This talk explores methods of combining several baseline predictors into a single composite variable in order to generate a most powerful effect modifier in an RCT setting. Extensions to binary outcomes and flexible nonparametric models will be discussed as well as models for functional outcomes with functional predictors. The motivation for the work in this talk is finding effect modifiers for the treatment of depression that can differentiate a specific drug response from placebo response.

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