CONFIDENCE INTERVALS AND POINT ESTIMATES FOLLOWING AN ADAPTIVE GROUP SEQUENTIAL TEST

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This paper proposes a method for computing confidence intervals with exact or conservative coverage following a group sequential test in which an adaptive design change is made one or more times over the course of the trial. The key idea, due to Muller and Schafer (2001), is that by preserving the null conditional rejection probability of the remainder of the trial at the time of each adaptive change, the overall type-1 error, taken unconditionally over all possible design modifications, is also preserved. This idea is further extended by considering the dual tests of repeated confidence intervals (Jennison and Turnbull, 1989) and of stage-wise adjusted confidence intervals (Tsiatis, Rosner and Mehta, 1984). The method extends to the computation of median unbiased point estimates.