

## INSTITUT FÜR STATISTIK ARBEITSGRUPPE BIOSTATISTIK



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Re: Biometrics #070428CF

Dear Prof. Freedman,

we would like to thank you, the associate editor and the referee for a fast and very useful review of our submission that helped to substantially improve the manuscript in various respects. In particular, we made three major changes:

**Special cases of the general framework:** In Section 6 of the revised manuscript we discuss in more detail how the general framework can be adapted to specific data analysis tasks. Previously suggested maximally selected chi-squared statistics, rank statistics, and Cochran-Armitage statistics are shown to be special cases of the framework.

**Asymptotic distributions:** We compare our new algorithm for computing the conditional asymptotic distribution to unconditional asymptotic approximations previously suggested in the literature.

**Interactions and recursive partitioning:** Techniques for detecting splits in interactions of multiple covariates are discussed more consistently and in more detail throughout the paper. Similarities and differences with respect to recursive partitioning algorithms (such as CART) are addressed in Section 6.

A detailed point-to-point reply to the referee and associate editor is included below.

Best regards,

Torsten Hothorn