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Exact Poly-K test. (English) [Zbl 1346.62140]

Summary: For animal carcinogenicity study with multiple dose groups, positive trend test and pairwise comparisons of treated groups with control are generally performed using the Cochran-Armitage, Peto test, or Poly-K test. These tests are asymptotically normal. The exact version of Cochran-Armitage and Peto tests are available based on the permutation test assuming fixed column and row totals. For Poly-K test column totals depend on the mortality pattern of the animals and cannot be kept fixed over the permutations of the animals. In this work a modification of the permutation test is suggested that can be applied on exact Poly-K test.

MSC:

62P10 Applications of statistics to biology and medical sciences; meta analysis
62G08 Nonparametric regression and quantile regression
62J05 Linear regression; mixed models
62J15 Paired and multiple comparisons; multiple testing

Keywords:
carcinogenicity studies; dose response; exact test; Poly-K test

Full Text: DOI

References:

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