**Statistical notes on false positive and negative error rates in  
the evaluation of long-term carcinogenicity bioassays**  
  
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The appropriate interpretation of mortality-adjusted tumor incidences in long-term carcinogenicity  
bioassays depends substantially on the actual false positive and false negative error rates. These depend, among other things, on the type of analysis of multiple correlated tumor sites and the mode of dose-response dependence in relation to the design. Selected quantitative results, such as shape-to-design relationship and discreteness are presented and the influence of further issues is discussed qualitatively.