Reserach Article Review

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1. The selected field of interest was medicine and biostatistics.
2. Citation:
   Xu, W., & Hao, M. (2018). *A unified partial likelihood approach for X-chromosome association on time-to-event outcomes*. Genetic Epidemiology, 42(1), 80-94. doi:10.1002/gepi.22097.
   Link:
   https://journals-scholarsportal-info.myaccess.library.utoronto.ca/pdf/07410395/v42i0001/80_auplafxaoto.xml
3. The author was affiliated with Dalla Lana School of Public Health of UofT.
4. There is no information provided about the statistical software being used.
5. The data was derived from observational studies, more specially, the survival of colorectal cancer patients with metastatic disease.
6. Because the data was used for validating and comparing the methodology proposed in the article, the article had no necessity, and hence does not present any summary statistics about the dataset.
7. Yes, the article provides 11 tables and 3 plots. The tables are to compare the proposed statistical methodologies under 3 scenarios. More specifically, the comparisons of bias of parameters, type I error rate, and power under different methodologies. For the plots, Plot 1 is a line chart of the estimate parameters under different processes. Plot 2 is a line chart of the survival rate by the months of survival. Plot 3 is a Manhattan plot for all X-chromosome SNPs using four methods.
8. The article included a log-rank test, the article did not mention the test statistic, underlying distribution, or confidence interval, the P-value comparing the two Kaplan-Meier curves is 0.115. The article also mentions the partial likelihood ratio test. However, the article performed partial LRT on generated data with parameters chosen from different methodologies, then compare the estimated type I error rate, power, and bias of parameters. Therefore, test statistics, CI, or p-value of the test itself are not given.
9. In the article, the power and type I error rate are presented to three decimal places, the bias of parameters are presented to four decimal places, and the percentage are presented to one decimal place.
10. The article included Kaplan-Meier curve, partial LRT, and log-rank test. Also, for visualization, the article used Manhattan plot