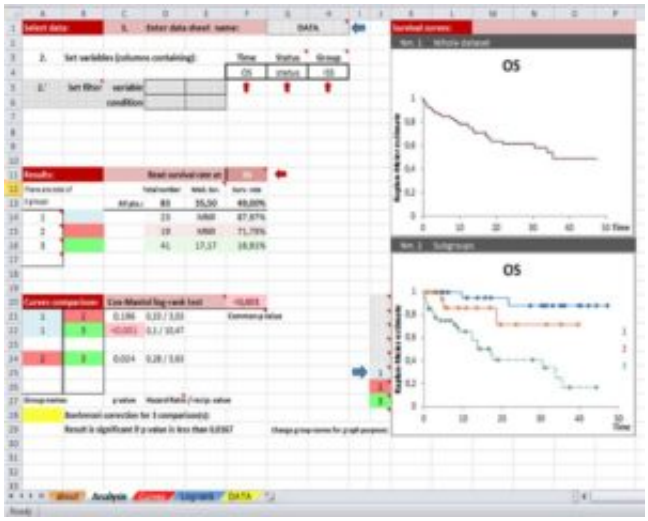
Survival analysis using Excel: learn it, use it and improve your work

Questions about disease prognosis and patient survival are of central importance in everyday hematology/oncology clinical practice. If a person working as a practicing clinician would like to evaluate his/her own work or check if some factor affects survival of his patients, he can't simply look at or compare number of deceased patients in different groups because clinical events are time dependent; they happen at different *"pace"* in different groups of patients during follow-up. Such data are termed *censored* in nature because we don't know would patient experience event of interest if follow-up was longer. Methods needed to summarize and analyze such data were developed more than 50 years ago by Kaplan and Meier and are collectively termed *survival analysis*. Data analysis of this kind usually requires commercial statistical packages that might not be readily available, at least not in clinical settings or at a specific computer used for data collection. However, most everyday computers are equipped with word processing and spreadsheet software like Microsoft Office or similar toolsets.



Look at the user interface

Very interesting and practical article accompanied by a custom made *Excel Workbook* was recently published in a peer reviewed journal. Workbook itself is a free and user-friendly statistical program utilizing methods of Kaplan and Meier and log-rank test to analyze and compare survival of patients between groups. In contrast to commercial statistical packages, it can be used on almost any computer (prerequisite is MS Office installed), enables rapid data screening using drop-down menus and produces fully customizable graphical presentations. Special feature, usually inaccessible by commercial statistical packages, is direct insight into the mechanics of statistical tests. This enables unique "real-time" *learning* experience and better acquaintance with the data-

set.

Author Marko Lucijanic, MD is working as a hematology resident and has developed this spreadsheet software from a perspective of a practicing clinician. As stated by the author, end-user comments and suggestions are welcomed and future updates in line with received feedback are expected.

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Publication

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