

P8108 Group 5 Project Proposal

Topic & Objective

We are going to conduct an analysis project by using the lung cancer dataset in the ‘survival’ package in R. This project aims to find if the nutritional factors such as appetite, caloric intake, or overall food intake will bring significant differences to the survival rate among patients with advanced colorectal or lung cancer. The secondary outcome is to evaluate the association between both the physician’s assessments of performance status (PS) as well as the patient’s assessment of their own performance status and the survival rate.

Planned Methods

- Parametric (Exponential, Weibull) & non-parametric estimation (Kaplan-Meier, Fleming-Harrington);
- Semi-parametric Model (Cox proportional hazards model);
- Hypothesis test: Log-Rank Test & Wilcoxon Test;
- Other topics: x-year survival time estimation, time-dependent covariates analysis, conditional survival, proportional hazards, etc.

Timeline

Date	Descriptions
09/28/2022-10/03/2022	Complete project proposal
10/04/2022-10/15/2022	Propose, Background, and Method descriptions
10/16/2022-10/31/2022	Analysis, Interpretations, and Result discussions
11/01/2022-11/12/2022	Final report modifications
11/13/2022-11/20/2022	Presentation preparation
11/21/2022	In class presentation
12/19/2022	Submit final report

Team members & Roles

Our teammates include: Chloe Jian (qj2163), Hening Cui (hc3212), Jibei Zheng (jz3425), Pengchen Wang (pw2550), Xueqing Huang (xh2470), Qihang Wu (qw2331). Qihang will be the team leader in our group.

We are going to split all the parts equally in each section and the team contribution will be adjusted later in the final report.

Reference

- Ajagbe, O. B., Kabair, Z., & O'Connor, T. (2014). Survival analysis of adult tuberculosis disease. *PLoS ONE*, 9(11). <https://doi.org/10.1371/journal.pone.0112838>
- Loprinzi, C. L., Laurie, J. A., Wieand, H. S., Krook, J. E., Novotny, P. J., Kugler, J. W., Bartel, J., Law, M., Bateman, M., & Klatt, N. E. (1994). Prospective evaluation of prognostic variables from patient-completed questionnaires. North Central Cancer Treatment Group. *Journal of clinical oncology : official journal of the American Society of Clinical Oncology*, 12(3), 601–607. <https://doi.org/10.1200/JCO.1994.12.3.601>