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The Estimation of (Covid-19) Cases in Kurdistan Region Using Nelson Aalen Estimator

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ABSTRACT

It is described how the Nelson–Aalen estimator may be used to control the rate of a nonparametric estimate of the cumulative hazard rate function based on right censored as well as left condensed survival data, furthermore how the Nelson–Aalen estimator can be utilized to estimate various amounts. This technique is mostly applied to survival data and product quality data similar to the incorporated relative mortality in a multiplicative model with outer rates and the cumulative infection rate in a straightforward epidemic model. It is shown that tallying measures produce a structure that permits to a brought together treatment of all these different conditions, and the main little and massive sample properties of the assessor are summarized. This estimator is a weighted average of the Nelson-Aalen

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reliability estimates over two time periods. The suggested estimator's suitability and utility in model selection are reviewed. And a real-world dataset is evaluated to demonstrate the proposed estimator's suitability and utility. This work proposes a simple and nearly unbiased estimator to fill this gap. The information was gathered from the Ministry of Health's website between October 1, 2020, and February 28, 2021. The results of the Nelson Allen Estimator demonstrated that the odds of surviving were higher during a short period of time after being exposed to the virus. As time passes, the possibilities become slimmer. The closer the estimate comes to value 1 from 0.5 upward, the greater the chances of surviving the infection.

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I was awarded a B.Sc. in Statistics from the University of Salahaddin in 2002. I also received a M.Sc. degree in applied statistics at Sulaymaniyah University in 2007. I was awarded a PhD from Sheffield University in 2018. My research interest in Bayesian inference, MCMC, Statistical Modeling, Quality control charts and Time series analysis

REFERENCES

D. Abbas. Analysis of breast cancer data using Kaplan-Meier survival analysis. *Journal of Kufa for Mathematics and Computer*, vol. 1, no. 6, pp. 7-14, 2012.

T. D. Bluhmki. The wild bootstrap for multivariate Nelson-Aalen estimators. *Lifetime Data Analysis*, vol. 25, no. 1, pp. 97-127, 2019.

R. L. Cao. Presmoothed Kaplan-Meier and Nelson-Aalen estimators. *Journal of Nonparametric Statistics*, vol. 17, no. 1, pp. 31-56, 2005.

C. A. El-Nouty. The presmoothed Nelson-Aalen estimator in the competing risk model. *Communications in Statistics-Theory and Methods*, vol. 33, no. 1, pp. 135-151, 2005.

D. A. Luo. Bias and mean-square error for the Kaplan-Meier and Nelson-Aalen estimators. *Journal of*

Nonparametric Statistics, vol. 3, no. 1, pp. 37-51, 1993.

R. A. Jiang. A bias-corrected Nelson-Aalen estimator. In: IOP Conference Series: Materials Science and Engineering. Vol. 1043. Changsha: IOP Publishing, p. 022013, 2021.

A. A. Winnett. Adjusted Nelson-Aalen estimates with retrospective matching. Journal of the American Statistical Association, vol. 97, no. 457, pp. 245-256, 2002.

A. S. Rossa. The Nelson-Aalen and Kaplan-Meier estimators under a sequential sampling scheme. Communications in Statistics Theory and Methods, vol. 38, no. 16-17, pp. 3077-3098, 2009.

H. A. Zhang. On Nelson-Aalen type estimation in the partial Koziol-Green model. Statistics, vol. 44, no. 5, pp. 455-465, 2010



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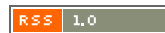
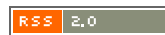
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