

広島統計談話会
Hiroshima Statistics Study Group

第 320 回談話会を下記のように開催致しますので
御参集下さいますようご案内申し上げます。

You are cordially invited to the 320th meeting as scheduled below.

日 時 : 2019 年 12 月 6 日 (金) 15:00 –
Date : 15:00 –, Friday, December 6, 2019

場 所 : 放射線影響研究所 講堂
Place : Auditorium, RERF

演 者 : 小向 翔 博士 (大阪大学大学院医学系研究科情報統合医学講座 医学統計学)
Speaker : Sho Komukai, Ph. D.
Associate Professor
Division of Biomedical Statistics, Department of Integrated Medicine,
Graduate School of Medicine, Osaka University

演 題 : 「地域がん登録データ解析における頑健なネット生存率推測法」

Title : “Robust inference for the net survival in the analyses of cancer registry data”

要 約 :

Summary:

Cancer registries are utilized to various research questions for cancer populations, such as the comparisons for the cancer prognosis among nations. In the analyses of the cancer registry data, to deal with noninformation about the cause of death, net survival is widely used as the measure for cancer prognosis. Net survival is defined as a survival probability if a patient would not die due to reasons other than cancer. We introduce a doubly robust inference procedure to estimate the net survival in the presence of the covariate-dependent censoring occurring when analyzing actual cancer registry data. This estimator has double robustness in the sense that it requires the correctly-specified model for at least one of the outcomes and the censoring weight models. However, the crucial issue is that the results may have seriously bias when both models are misspecified. To overcome this issue, we discuss the extension of a robust inference based on the empirical likelihood method. We construct the time-dependent weight which makes the weighted mean of the survival function for sub-sample and the unweighted sample mean equal. The proposed method may be able to make remove a limitation about the number of models. We show the mathematical property, and also discuss the usefulness in the real data analysis.