

広島統計談話会
Hiroshima Statistics Study Group

第 253 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 253rd meeting as scheduled below.

日 時 : 2009 年 12 月 18 日 (金) 15:00 –
Date : December 18, 2009 (Fri) 15:00 –
場 所 : 放射線影響研究所 講堂
Place : RERF Auditorium
演 者 : 許 婉玲 博士 (放射線影響研究所統計部研究員)
Speaker : Wan-Ling Hsu, Ph.D.
Research Scientist, Department of Statistics, Radiation Effects Research
Foundation
演 題 : 「放射線、炎症、癌発生率への同時モデルの応用」
Title : “Application of Joint Modeling on Radiation, Inflammation, and Solid Cancer
Incidence”

要 約 :
Abstract :

The study applied a joint model to investigate the causal association among radiation, inflammation, and solid cancer incidence for A-bomb survivors. It is hypothesized that the risk of radiation exposure on solid cancer incidence might be mediated through inflammation process. A total of 7,826 who participated in the Adult Health Study in 1964-66 were selected and followed up until 2001 for solid cancer incidence. A joint model used in this study combines (1) survival model for solid cancer incidence and (2) logistic regression model to capture the probability of having higher average WBC count. The preliminary results showed that radiation and smoking were significant risk factors for elevated WBC. The survival model indicated that radiation, smoking, and WBC were significant risk factors for solid cancer incidence. About 8% of total effect of radiation on solid cancer was mediated through higher WBC. In conclusion, there was apparent indication that radiation and smoking, as well as elevated WBC, resulted in higher risk of solid cancer for A-bomb survivors.