

広島統計談話会

Hiroshima Statistics Study Group

第 266 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 266th meeting as scheduled below.

日 時 : 2011 年 9 月 30 日 (金) 15:00 –
Date : September 30th, 2011 (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 : 「喫煙や放射線によるがんリスクへの慢性炎症の媒介的な関与」
Title : “Mediating Role of Chronic Inflammation in Cancer Risk for Smoking and Radiation”

要 約 :

Summary:

This study aims to investigate the mediating effect of chronic inflammation in radiation exposed survivors who are diagnosed with solid cancer later in life. It is hypothesized that the effect of radiation exposure on cancer is mediated via chronic inflammation. Based on the presumed causal associations, a joint model with discrete-time survival model is analyzed to investigate the mediating effect of inflammation. The study population consists of 7,826 atomic bomb survivors who were at risk of cancer in 1964-65 and followed up till 2001. About 27% (n = 2,085) developed solid cancer over the study period. The mediating proportion of inflammation for subjects who were exposed to ≥ 0.5 gray of ionizing radiation is statistically significant and accounts for 8% of the total radiation exposure effect. The mediating proportions account for about 30% of the total effect among current and former smokers, but were only marginally significant. A Monte Carlo simulation indicates that parameter-estimate bias is negligible. The results provide unambiguous evidence for a statistically significant mediating effect of inflammation with radiation exposure and a marginally significant though practically important mediating effect of inflammation with smoking.