

Dieter Baum, Gurami Tsitsiashvili

On Product Connection Theorems for Markov Chains

Bericht des Journal of Public Health

Kurzfassung

Aim: Several international studies have already investigated the influence of socioeconomic factors on the risk of cancer. For Germany, however, the data are still insufficient. We examined the effects of social differences on cancer incidence and mortality on the population of Bremen, a town in northwest Germany. **Subjects and methods:** Data were obtained from the Bremen Cancer Registry, a population-based registry. The database comprised 27,430 incident cases, newly diagnosed between 2000 and 2006. The allocation of social class for each patient was based on the home address at the time of diagnosis, which led to the corresponding town district, which again could be linked to the "Bremen discrimination index." Based on this index, cases were allocated to five categories, for which we compared standardized incidence ratios (SIR) and mortality ratios (SMR) for different cancers: prostate, breast, lung, colorectal, bladder, uterine, ovarian, cervical, malignant melanoma of the skin, non-melanoma skin cancer and all cancer sites summarized. **Results:** The influence of social status was observed for different cancer sites. An inverse association was ascertained for all cancer sites (only men) and for tumors of the oral cavity and pharynx, and for lung, cervical and bladder cancers. A positive correlation was observed for female breast cancer, malignant melanoma, non-melanoma skin tumors and prostate cancer. **Conclusions:** In spite of the methodical restrictions, our analyses suggest an association between social factors and cancer incidence and mortality. The results are in agreement with international studies. Many of the observed social class differences could probably be explained by known risk factors, such as smoking, alcohol consumption, diet and physical activity.