Abstracts

59 An International Historical Cohort Study of Workers in the Hard-Metal Industry - Austrian Component

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Objectives Researchers at the University of Pittsburgh and the University of Illinois at Chicago are coordinating an international historical cohort study of workers in the hard-metal industry. Funding is provided in part by the International Tungsten Industry Association. From Austria they approached a large industrial plant in Reutte, Tyrol, and the Institute of Environmental Health at the Medical University of Vienna to coordinate the Austrian part of the study that is financially supported by the national workers insurance company.

Methods As a first result of the cooperation between Reutte and Vienna a cross-sectional study was designed based on a questionnaire directed to all present workers and to past workers with still valid addresses. This questionnaire served two purposes: (1) to announce the aim of the cohort study and (2) to obtain more detailed data on smoking history and general health history than is available in the company records.

Results Our preliminary estimates of the numbers of participants at the two Bavarian plants are 2,711 and 1,577. At the North Rhine-Westphalian plant we enrolled 3,700 workers (less than half of the overall workforce). Some current workers refused to be enrolled in the study. 3.7% of 676 and 0.2% of 417 at Bavarian plants and 0.9% of 637 at North Rhine-Westphalian plant. Basic data of these workers will be documented. Cox models will be used for internal analyses.

Conclusions The data collection process in North Rhine-Westphalia was restricted due to the large number of paper files. Otherwise it would not be feasible to meet the budget and time phalia was restricted due to the large number of paper files. Otherwise it would not be feasible to meet the budget and time.

We will report on the progress of our ongoing work on the international epidemiology study.

60 Cancer Morbidity of Lead Exposed Workers in Korea

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Objectives To compare cancer patterns in lead exposed workers with the Korean general population, and to explore the relationship between cancer and lead exposure in an occupational setting.

Methods Using from the Korean annual medical surveillance for exposure to lead, a cohort comprising 75,184 lead exposed workers working between January 1st, 2000 and December 31st, 2004 was compiled. This cohort was merged with the Korea National Central Cancer Registry (KNCCR) in order to evaluate the cancer morbidity for these workers between 2000 and 2008.

Results There were 793 cases cancer and, the incidence of stomach cancer (SIR 1.17, 95% CI = 1.01–1.36) was found to be elevated in lead chromate workers. Excesses were observed for kidney (2.15.1.19–3.88) and bladder cancers (2.29.1.49–4.58) in lead exposed workers ≥20 years of job duration, kidney cancer (2.25.1.21–4.18) in workers with ≥10 ug/dl of blood lead level and lung cancer in female workers with ≥10 ug/dl blood lead level.

Conclusions Our study showed excess of lung cancer in female workers, stomach cancer in lead chromate exposed workers and a possible dose-response relationship between kidney cancers and lead exposure.

61 An International Historical Cohort Study of Swedish Workers in the Hard-Metal Industry

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In 2006, IARC found limited evidence in humans and sufficient evidence in animals that tungsten carbide (WCCo) acted as a lung carcinogen (Group 2A). A Swedish historical cohort study was established as part of the international cohort. Three Swedish sites are included,