resulted in an odds ratio of 1.14 (95% CI of 0.95–1.35) compared to individuals unexposed to PAHs; results were similar at substantial levels of exposure. Considering workers exposed to only a single profile of PAH depending on the combustion product, results were: PAH from wood [0.88 (0.35–2.21)], from coal [0.96 (0.52–1.78)], from petroleum [1.04 (0.86–1.25)], and from other sources [1.84 (1.04–3.25)]. Exposure to benzo (a) pyrene resulted in an odds ratio of 1.31 (1.06–1.63).

Conclusions Results suggested excess risk associated with exposure to benzo (a)pyrene and to PAHs arising from cooking fumes, plastic, and rubber; but not for PAH exposures derived from wood, coal, and petroleum combustion products. These results are partly in line with previous reports of highly exposed workers, though exposure levels would not have been as high in our population-based study.

106 CANCER INCIDENCE AND MORTALITY IN AGRICULTURAL COHORTS IN THE AGRICOH CONSORTIUM

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Objectives Farmers have different cancer incidence and mortality patterns than the general population, with excesses of some cancers (e.g., lymphoma, multiple myeloma, brain, skin and prostate), and lower risk of others (e.g., lung). AGRICOH, a consortium of 27 cohort studies in agricultural populations, was formed to investigate the impact of specific occupational, environmental and lifestyle factors on health outcomes in farming populations. This study aims to describe the cohort-specific cancer incidence and mortality rates in AGRICOH studies with cancer information.

Methods Outcome data have been obtained from linkage to cancer and mortality registries. Person-years of follow-up contributed by each participant will be calculated and grouped into 5-year age intervals and calendar years. Crude and age- and gender- standardised incidence and mortality rates will be estimated for each cohort, for all cancers, individual cancer sites and, where possible, specific histological subtypes. Rates will be stratified by participant's relationship to the farm (farmer, spouse) and primary commodity produced (crop, livestock or both).

Results Seven AGRICOH cohorts with cancer data have agreed to participate (n = 315,298). These cohorts represent Australia (Pesticide Exposed Workers & Victorian Grain Farmers), France (Agriculture & Cancer), Korea (Korean Multi-Center Cancer), Norway (Cancer in the Norwegian Agricultural Population), and USA (United States Agriculture Health Study & The Marshfield Epidemiology Study Area Farm Cohort). Target populations vary between studies and include active and retired agricultural workers, farm owners and their families, and agricultural groups exposed to specific agents.

Conclusions Comparing and contrasting patterns of cancer incidence and mortality in studies from around the world with different agricultural practices and populations will generate hypotheses for future data-pooling projects. In particular, the study will identify cancers of high priority in agricultural workers and provide hypotheses on potential causes for differences in rates between populations, or on common exposures that might contribute to similarities.

Session: N. Noise & hearing

107 NOISE EXPOSURE AND HEARING LOSS AMONG NAVAL PERSONNEL

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Objectives In a questionnaire conducted by The Royal Norwegian Navy in 2002/2003, 38% of the personnel reported to be much/very much exposed to noise and 24% reported reduced hearing. Based on these findings, further investigation on the working conditions on board naval vessels and mapping NIHL among the personnel on board was initiated. A part of this study is to compare noise levels and occurrence of hearing loss on large vessels like frigates and smaller vessels like coastal corvettes.

Methods Noise levels in areas were measured on three costal corvettes (CC) and three frigates (F) using Brüel & Kjær Hand-held Analyzer Type 2250. All personnel working on frigates and coastal corvettes were invited to audiometric testing, using Interacoustics AD226. NIHL was classified as ≥ 25 dB in at least one ear at 3000, 4000 or 6000 Hz. They completed a questionnaire concerning noise exposure and background information.

Preliminary Results Noise levels in cabins range from 68.5 dB (A) to 85.5 dB(A) in CC and from 42.1 dB(A) to 80 dB(A) in F. 157 persons were currently or previously working on F and 91 persons were currently or previously working on CC. The prevalence of NIHL among personnel in CC was 40.7% and 28.7% among personnel in F (Pearson Chi-Square test, P = 0.053). Mean age for CC was 32 and for F 28 years. When adjusting for age using logistic regression no differences in NHIL among the two vessel groups were found.

Conclusions The CC has higher measured noise levels than the F. Our analysis shows a higher prevalence of NIHL among personnel currently or previously working on CC compared to F. When adjusting for age the effect disappears. This may indicate that the NIHL found was not related to vessel group.

108 HEARING SURVEILLANCE IN THAI FORKLIFT DRIVERS WITH ENVIRONMENTAL MEASUREMENT

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Background Noise is one of physical hazards found in forklift drivers, especially with diesel engine. Thailand's 2010 regulation on the control of noise at work is not more than 85 dBA per 8 hour-TWA.