high exposure levels for 6 known/suspected lung carcinogens in the Environment And Genetics in Lung cancer Etiology (EAGLE) case-control study, that enrolled 2100 lung cancer cases and 2120 population controls in Lombardy, Italy, in 2002–2005. ORs and 95% CIs were calculated in men (1537 cases and 1617 controls), by logistic regression adjusted for potential confounders, including smoking and co-exposure to JEM carcinogens. The population attributable fraction (PAF) was estimated as impact measure.

Results Men showed an excess risk even at low exposure to asbestos (OR=1.76, 95% CI: 1.42 to 2.18), crystalline silica (OR=1.31, 95% CI: 1.00 to 1.71), and nickel-chromium (OR=1.18, 95% CI: 0.90 to 1.53), with positive trends for intensity. An increased risk only for high exposure to polycyclic aromatic hydrocarbons was found (OR=1.64, 95% CI: 0.99 to 2.70). The PAFs for any exposure to asbestos, silica and nickel-chromium were 18.1%, 5.7%, and 7.0%, respectively, corresponding to about 300–800 cases/year in Lombardy.

Conclusions These findings support the substantial role of occupational carcinogens on lung cancer burden, even in a low exposed general population.

49 PUBLIC HEALTH IMPACT OF EXPOSURE TO OCCUPATIONAL CARCINOGENS ON LUNG CANCER RISK

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Objectives Exposure to occupational carcinogens is an important preventable cause of lung cancer. Most of the previous studies were in highly exposed industrial cohorts. The authors' aim was to quantify lung cancer burden attributable to occupational carcinogens in a general population.

Methods They applied a new job-exposure matrix (JEM) to translate lifetime work-histories into never, low, and