

changes over time and investigated characteristics of marker concentrations in prediagnosis samples of patients with malignant pleural mesothelioma (MPM) and lung cancer (LC).

Methods We analysed multiple blood samples of 2262 volunteers of three groups: 1894 formerly asbestos exposed power industry workers, 266 mostly asbestos exposed patients suffering from chronic respiratory diseases and 102 not occupationally exposed controls. Marker concentrations were determined using commercial ELISA kits. For statistical analysis we used the t-test and multiple regression models.

Results We measured 3273 and 3218 concentrations of mesothelin and osteopontin respectively. Second, third and fourth samples were obtained in 691, 304 and 72 participants. 16 patients suffering from newly developed MPM or LC could be identified, seven of them had multiple prediagnosis samples. While marker concentrations were associated with age (mesothelin $p=0.006$, osteopontin $p<0.001$), gender and exposure duration had no influence. Asbestos exposed power industry workers with an overall increase of marker concentrations (mesothelin 53%, osteopontin 18%) showed mean annual increases of 0.176 nmol/l for mesothelin and 86 ng/ml for osteopontin.

Conclusions The concentrations of mesothelin and osteopontin in asbestos exposed healthy individuals are strongly influenced by age. Fixed cut-off values for deciding between clinical work up and continued surveillance appear inadequate. Results would be consistent with an increase of the mesothelin concentration between 6 and 18 months before specific clinical symptoms develop.

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SERIAL MEASUREMENTS OF MESOTHELIN AND OSTEOPONTIN IN FORMERLY ASBESTOS EXPOSED POWER INDUSTRY WORKERS

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Objectives For the proposed tumour markers mesothelin and osteopontin we determined the influence of gender, age and former asbestos exposure on blood concentrations, assessed the