

Analysis of occupational asbestos exposure and lung cancer mortality using the G formula

Deskripsi Lengkap: <https://lib.fkm.ui.ac.id/detail.jsp?id=102138&lokasi=lokal>

Abstrak

We employed the parametric G formula to analyze lung cancer mortality in a cohort of textile manufacturing workers who were occupationally exposed to asbestos in South Carolina. A total of 3,002 adults with a median age of 24 years at enrollment (58% male, 81% Caucasian) were followed for 117,471 person-years between 1940 and 2001, and 195 lung cancer deaths were observed. Chrysotile asbestos exposure was measured in fiber-years per milliliter of air, and annual occupational exposures were estimated on the basis of detailed work histories. Sixteen percent of person-years involved exposure to asbestos, with a median exposure of 3.30 fiber-years/mL among those exposed. Lung cancer mortality by age 90 years under the observed asbestos exposure was 9.44%. In comparison with observed asbestos exposure, if the facility had operated under the current Occupational Safety and Health Administration asbestos exposure standard of < 0.1 fibers/mL, we estimate that the cohort would have experienced 24% less lung cancer mortality by age 90 years (mortality ratio = 0.76, 95% confidence interval: 0.62, 0.94). A further reduction in asbestos exposure to a standard of < 0.05 fibers/mL was estimated to have resulted in a minimal additional reduction in lung cancer mortality by age 90 years (mortality ratio = 0.75, 95% confidence interval: 0.61, 0.92).