Abstract

We conducted a meta-analysis to quantitatively compare the association between occupation as a painter and the incidence or mortality from lung cancer. PubMed and the reference lists of pertinent publications were searched and reviewed. For the meta-analysis, we used data from 47 independent cohort, record linkage, and case-control studies (from a total of 74 reports), including > 11,000 incident cases or deaths from lung cancer among painters. Three authors independently abstracted data and assessed study quality. The summary relative risk (meta-RR, random effects) for lung cancer in painters was 1.35 [95% confidence interval (CI), 1.29-1.41; 47 studies] and 1.35 (95% CI, 1.21-1.51; 27 studies) after controlling for smoking. The relative risk was higher in never-smokers (meta-RR = 2.00; 95% CI, 1.09-3.67; 3 studies) and persisted when restricted to studies that adjusted for other occupational exposures (meta-RR = 1.57; 95% CI, 1.21-2.04; 5 studies). These results support the conclusion that occupational exposures in painters are causally associated with the risk of lung cancer.

Keywords

Epidemiology, Lung cancer, Metaanalysis, Painter.