

## Silicosis and Lung cancer

*P Carta et al. Occupational and Environmental Medicine. December (2001) Vol.58 # 12 p 786.*

Asbestosis is strongly associated with lung cancer, the question addressed in this paper is whether silicosis has a similar link to lung cancer.

IARC classified crystalline silica as a probable carcinogen in 1987. Some commentators doubted this, asserting that co-exposure to asbestos was a plausible explanation for the apparent association.

The subject has been extensively reviewed already: Soutar CA et al. *Ann Occ Hyg* (2000);44:3-14 and Hessel et al *J Occ Env Med* (2000);42:704-720. The association between severity of silicosis and lung cancer remained debatable.

This is a report of a longitudinal epidemiological study 10 years after its initial findings. Early results showed no significant association between silicosis (the primary selection criterion) and lung cancer.

Exposure to Radon daughters was calculated, based on occupational hygiene results, previously not examined in this context.

Mortality from tuberculosis among people with silicosis at baseline, was very high; SMR = 22 (95% CI = 17.4 to 27.8).

Mortality from non malignant chronic respiratory disease ; SMR = 6.1 (95% CI = 5.44 to 6.69)

Diseases of the Urinary system; SMR = 1.97 (95% CI = 1.13 to 3.43)

All other outcomes were not statistically significant.

Lung cancer did not show a dose response relationship with exposure to silica either at 0 years, 10 years or 20 years.

LC was associated with exposure to Radon daughters.

### Comment

If crystalline silica were a cause of lung cancer, it would appear that the mechanism probably does not involve silicosis.

The result casts some doubt on the proposed causal link between silica exposure and lung cancer.