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**MORTALITY FROM LUNG AND OESOPHAGEAL CANCERS IN A 25-YEAR HISTORICAL COHORT OF SILICOTIC WORKERS IN HONG KONG**

Lap Ah Tse,<sup>1</sup> Ignatius Yu,<sup>1</sup> Chi Chiu Leung<sup>2</sup> <sup>1</sup>Chinese University of Hong Kong, Shatin, Hong Kong; <sup>2</sup>Department of Health, Hong Kong, Hong Kong

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**Objectives** To elucidate whether excess risks of mortality from lung and oesophageal cancers was associated with silicosis.

**Methods** All 3202 workers with silicosis diagnosed in Hong Kong during 1981–2005 were followed up till 2006 to ascertain the causes of death, with a high rate of follow-up (97.5%). Standardised mortality ratios (SMR) were calculated and Axelson's indirect method was used to adjust for the potential confounding effect of smoking and alcohol drinking. Exposure-response relationship was examined by multiple Cox's regression analysis.

**Results** 157 of the 1562 deaths (20.5%) were from lung cancer and 23 (1.5%) were oesophageal cancer, with a SMR of 1.86 (95% CI 1.59 to 2.17) and 1.77 (1.18 to 2.66), respectively. The risk of lung cancer (SMR=3.02, 95% CI 2.31 to 3.94, 54 deaths) and oesophageal cancer (3.22, 1.75 to 5.92, 10 deaths) was higher in underground caisson workers (exposure to radon and high level of silica) than surface construction workers (no radon but low exposure to silica) (1.63, 1.32 to 2.00; 1.37, 0.76 to 2.45). Lung cancer SMR in caisson and surface construction workers reduced to 1.96 (1.50 to 2.56) and 1.06 (0.86 to 1.30) after indirect adjustment of smoking. The smoking-alcohol indirectly adjusted SMR for oesophageal cancer was 1.40 (0.76 to 4.05) for caisson and 0.60 (0.33 to 1.08) for surface workers. No consistent exposure-response relationships were detected between silica dust or severity of silicosis and mortality from lung and oesophageal cancers.

**Conclusions** Our cohort study hardly supports silica or silicosis as a determinant of lung and oesophageal cancers.