Detection of pulmonary scarring by chest radiography and lung cancer risk

The relationship between lung scarring and lung cancer is uncertain, although it has been postulated that inflammation induces genetic damage leading to DNA mutations with a resultant increase in the risk of scar cancers.

In this study, using analysis of data from the prostate, lung, colorectal and ovarian cancer screening trial, the authors tried to establish a relationship between scarring and lung cancers. Of 66 863 cancer-free participants aged 55–74 years who completed baseline questionnaires and had PA chest radiographic examinations and follow-up for 12 years, 5041 (7.3%) had baseline scarring radiographically; 809 (16%) of these had an elevated risk for lung cancer after adjustments for age, gender, race and cigarette smoking. The relationship between scarring and lung cancer was specific for cancers ipsilateral to the scarring. The risk of developing ipsilateral lung cancer was twofold higher and remained so throughout the 12 years of the study. Lung cancer risk was especially high in individuals with diffuse scarring. The commonest cancer detected was adenocarcinoma.

Scars were more commonly reported in the base of the left lung. The authors postulated that this was due to cardiac shadowing and atelectesis more commonly occurring here. Pleural plaques were also sometimes misdiagnosed as lung scarring. Although this study relied on radiographic diagnoses of lung scarring, the authors concluded that old scars do increase the risk of lung cancer. Perhaps there is a role for clinical monitoring for lung cancer.


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