

## Silica

ITS Yu et al. *Int. J. Cancer* (2006) Vol.120 p 133 - 139

### Exploring the joint effects of silicosis and smoking on lung cancer risks

The meta analysis seems to show that there is no synergistic effect between silicosis and smoking in the risk of lung cancer.

This was a complex form of meta-analysis designed to test whether or not silicosis increases the risk of lung cancer presented by smoking. Most studies do not include sufficient numbers of silicosis cases who do not smoke, meta analysis provides a mechanism for combining weak studies to create a better dataset.

The results can be interpreted to mean that the risks operate independently i.e. silicosis does not increase the risk attributable to smoking.

If anything, the silicosis attributable risk of lung cancer decreased among smokers relative to non-smokers. This would be consistent with smoking having 'harvested' those who would otherwise have been susceptible to other lung carcinogens. It would also be consistent with smokers becoming silicotic at lower doses of silica, but only if silica is carcinogenic.

#### Comment

The direct interpretation of the results is that there is no support for synergism between silicosis and smoking in the cause of lung cancer.

In our view, the results support the position that lung cancer in smokers who are also silicotics should be attributed to smoking with no material contribution from silicosis. They should be regarded as separate causes, taking *Wilsher* as the most appropriate precedent.

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