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Need to test impact of DNA-based risk scores

Young and Hopkins highlight the emerging data suggesting that smokers who perceive themselves at a lower risk of lung cancer may be less likely to take part in, and less likely to adhere to, lung cancer screening programmes.^{1–4} Their work suggesting that a risk score that includes genetic markers of susceptibility of lung cancer alters optimistic bias, improves quit rates in smokers and may encourage participation in lung cancer CT screening is exciting.

Risk scores that include genetic risk data may reach the parts that other risk scores fail to reach. In the lung-SEARCH screening trial, we found that a negative family history

specifically led some smokers to decline participation in screening. Being told that risk of lung cancer is ‘in your genes’ may specifically counter perceptions of protection from a negative family history. This proposal could be tested with further qualitative exploration of risk perception in smokers offered participation in screening trials. However, in a Cochrane review of the literature, Marteau *et al*⁵ found no overall impact of presenting DNA-based risk scores, although studies are few and of variable quality.

Lung cancer screening programmes especially need to target those at the highest risk in order to maximise cost effectiveness. DNA-based risk profiling may contribute to better targeting for those enrolling in lung cancer screening programmes. This too needs to be tested prospectively.

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