CORRESPONDENCE

Increasing smokers’ risk perception improves CT screening participation

We read with interest the article by Patel et al.1 and wish to comment on their findings with specific regard to smokers’ risk perception, motivation and low participation rates in CT screening programmes.

Based on the studies to date, there is a consistent theme that smokers’ participation in CT screening programmes for lung cancer is poor when their motivation is low and much greater when their perception of risk of lung cancer is high.2,3 Despite overwhelming public health messaging, smokers continue to smoke, in large part, because they perceive their own risk from smoking to be low. This self-perception of low risk (termed optimistic bias) maintains a low level of motivational tension (the fear that smoking might indeed be harmful).4 We propose that optimistic bias can be undermined, and motivational tension increased, when smokers are confronted with adverse ‘personalised’ risk data.5 With advances in the understanding of the clinical and genetic factors underlying lung cancer susceptibility, we have developed a lung cancer susceptibility risk model.6 This model assigns current and former smokers a moderate, high and very high risk. In a group of randomly selected current smokers, 84% took up the offer of risk testing and, surprisingly, quit rates 6 months after testing were 20%, 36% and 40%, respectively (28% overall).6 Just as with triggering a decision to quit smoking, we suggest uptake of (and possibly adherence to) CT screening might be improved by risk testing that enhances risk perception, undermines optimistic bias and increases motivational tension.7

We tested this proposition in a scenario-based telephone questionnaire involving 850 current and former smokers (mean age 67, age range 44–86 years, 59% male and mean pack years 45). When told of a survival benefit with CT screening versus no screening, we found 68% agreed to undertake CT screening while 95% agreed to gene-based risk testing. Likelihood of participation in CT screening for lung cancer was 25% higher (absolute increase) in those testing high and very high risk compared with those at moderate (average) risk. Collectively, the results of these studies support our suggestion that optimistic bias can be undermined, and motivational tension increased, in current and former smokers through the use of personalised risk testing. We suggest that personalised risk testing, incorporating genetic markers of susceptibility, may help identify and motivate ‘high risk’ smokers to engage in CT screening.

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Competing interests None.

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