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LUNG ALERT

Second hand smoke exposure is associated with worse survival in early stage non-small cell lung cancer

▲ Zhou W, Heist RS, Liu G, *et al.* Second hand smoke exposure and survival in early-stage non-small cell lung cancer patients. *Clin Cancer Res* 2006;**12**:7187–93.

This study examines the possible association between the extent of second hand smoke (SHS) exposure prior to diagnosis of early stage non-small cell lung cancer (stages Ia-IIb) and survival after treatment. The 393 Massachusetts General Hospital patients were grouped into quartiles based on their SHS exposure and then the patients' own smoking history in pack–years was factored into the calculations.

The results reveal a statistically significant worsening of 5-year survival between the quartile with the lowest (<28 years) SHS exposure, 71% alive after five years, and those with the highest (>46 years) exposure, 47% alive at five years ($p < 0.001$). Recurrence-free survival was also greatly reduced in those with the heaviest exposure when compared with those in the lightest exposure group.

Interestingly, in further subgroup analysis it was found that those who had most of their SHS exposure in the work place were associated with worse outcome (adjusted hazard ratio of highest vs lowest quartile, 1.71 $P_{trend} = 0.03$) than those exposed either in the home (AHR 1.26 $P_{trend} = 0.2$) or "leisure" locations (AHR, 1.28. $P_{trend} = 0.2$). This will add further weight to the implementation of smoking bans in the public and workplace being introduced throughout the UK.

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