

Clinical reviews

Our panel of GPs review recent research papers in their specialist areas that may influence the way you practise

Reviewers

Addiction

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Cardiovascular disease

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Diabetes

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Obstetrics and gynaecology

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Paediatrics

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Respiratory disease

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Sexual health

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Smoking cessation

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Urology

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Smoking cessation

Quitting smoking improves survival in patients with lung cancer

Patients with lung cancer who stop smoking have lower all cause mortality rates compared with those who continue to smoke, a UK retrospective cohort study has found.

Primary care records from the Clinical Practice Research Datalink (CPRD) were analysed. In 2013, the CPRD database contained records from 4.4 million live patients in 674 practices, representing 6.9% of the UK population. Patients with a first diagnosis of lung, upper aerodigestive tract (UAT) or bladder cancer between 1999 and 2013 who smoked at diagnosis, survived for one year, had been registered with a practice for at least 12 months and had at least a year of follow-up data were included in the study.

The analysis was restricted to patients who survived for at least one year to limit confounding by stage of cancer at diagnosis. Patients were followed up until the end of 2013 or death, or were censored if they moved practice.

Patients were defined as smokers at diagnosis if they were recorded as smoking on the last occasion smoking status was updated within the three

years prior to diagnosis. Survival time was calculated as the time from the end of the first year after diagnosis until death. Associations between smoking cessation all cause mortality, cancer-specific mortality and death due to index cancer were assessed.

Adjustment was made to take account of age, gender, socioeconomic status, comorbidity, (asthma, CKD, COPD, diabetes, hypertension, peripheral arterial disease, stroke, psychoses), treatment and alcohol consumption.

There were 42,112 incident cancer cases; lung (27,615), UAT (3,248) and bladder (11,249). Information regarding smoking status at diagnosis was available for 81% of these cases (lung 83%, UAT 78%, bladder 79%), where smoking status was unknown patients were assumed to be either never smokers, or long-term ex-smokers. On this basis, 36%, 35% and 20% of lung, UAT and bladder cancer patients were classified as smoking at diagnosis.

The number of patients who smoked at diagnosis and survived for one year were: 2,882 with lung cancer (27% quit, 39% continued, 34% unknown); 757 with UAT cancer (29% quit, 37% continued, 34% unknown) and 1,733 with bladder cancer (21% quit, 49% continued, 30% unknown).

● Lung cancer patients who quit smoking had a significantly lower risk of all cause mortality compared with those who continued to smoke; adjusted HR 0.82 (95% CI: 0.74-0.92).

Median survival, from one year after diagnosis, was 1.08 years (95% CI: 0.94-1.24) for patients who continued smoking, and 1.97 years (95% CI: 1.68-2.26) for patients who quit.

● In UAT, smoking cessation was associated with a non-significantly lower risk of mortality; adjusted HR 0.81 (95% CI: 0.58-1.14).

● There was no evidence of an association between quitting and mortality in patients with bladder cancer.

Overall, 86% of people diagnosed with lung cancer died of the condition. Quitting smoking after a diagnosis of lung cancer was associated with lower cancer-specific mortality; but this became non-significant after adjustment; HR 0.89 (95% CI: 0.76-1.04).

There was no significant association between quitting smoking and death due to index cancer in patients with any of the cancers studied.

In patients who survived for at least one year, smoking cessation during that first year was associated with a lower risk of all cause mortality in lung cancer patients and the evidence was suggestive of a lower risk in UAT cancer. There was inconclusive evidence that quitting was associated with survival in bladder cancer. Although cancer specific mortality was reduced for lung cancer and UAT cancer this was to a non-significant level.

The authors conclude: 'The reduction in risk of death may be due to a reduced risk of cancer progression, but this needs further investigation.'

The study backs up regular advice for smokers with lung and UAT cancers to quit and highlights increased survival. It does not offer evidence that survival is due to specific effects of quitting on the primary condition.

DR PETER SAUL

Koshiaris C, Aveyard P, Oke J. Smoking cessation and survival in lung, upper aero-digestive tract and bladder cancer: cohort study. *Br J Cancer* 2017;117:1224-32 »