

Aspirin use associated with improved survival but only for bladder and breast cancer

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The protective effects of aspirin in older patients with a range of different cancers has been poorly studied prompting researchers to examine the benefits for a range of different cancers.

The risk-benefit ratio for the use of aspirin in older adults is still unclear though some secondary analyses of randomised trials have indicated that aspirin can reduce the incidence and mortality due to [colorectal cancer](#). Given this uncertainty, a team from the Division of Cancer Prevention, National Cancer Institute, Maryland, US, decided to focus their investigation on a post hoc analysis of older individuals in the prostate, lung, colorectal and ovarian cancer screening trial (PLCO).

PLCO was a large trial to determine the effects of screening on cancer-related mortality and secondary endpoints in people aged 55 to 74 years of age. The researchers limited their analysis to individuals at least 65 years of age after enrolment and whose baseline questionnaire contained information on aspirin use. Individuals who had a history of any of the cancers studied were excluded. The use of aspirin was then categorised as either less than or more than three-times/week. The aim of the study was to evaluate whether use of aspirin had an impact on the incidence and survival from bladder, breast, oesophageal, gastric, pancreatic and uterine cancers among individuals 65 years of age and older. The original PLCO data collection was completed in 2009 after 13 years of follow-up but for the current study, data collection continued until 2014, among individuals who consented to further follow-up or 2009 in those unwilling to be followed.

Findings

The eligible study population included 139,896 individuals with a mean age at baseline of 66.4 years (51.4% female). A total of 32,580 incident cancers were recorded during the follow-up period. The use of aspirin at least three times per week not associated with the incident risk of any of the included cancers. However, the researchers did find that after adjustment for co-morbidities, aspirin use (i.e., at least three times per week) was associated with a significantly increased survival compared to no use of the drug for bladder (hazard ratio, HR = 0.67, 95% CI 0.51–0.88, $p = 0.003$) and breast cancer (HR = 0.75, 95% CI 0.59–0.96, $p = 0.02$) only. In addition, any use of aspirin was also associated with a reduced risk of death from both bladder (HR = 0.75, 95% CI 0.58 – 0.98) and breast cancer (HR = 0.79, 95% CI 0.63–0.99) but again, not for any of the other cancers.

Unfortunately, the authors were unable to account for their findings and concluded that further work is needed to consider the relative benefits and harms associated with longterm use of aspirin.

Citation

Loomans-Kroppe HA, Pinsky P, Umar A. [Evaluation of aspirin use with cancer incidence and survival among older adults in the prostate, lung, colorectal, and ovarian cancer screening trial](#). JAMA Netw Open 2021