

Post diagnosis aspirin improves survival in all gastrointestinal cancers

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Vienna, Austria: Aspirin improves survival in patients with tumours situated throughout the gastrointestinal (GI) tract, results from a large study in The Netherlands show. This is the first time that survival data from patients with tumours in different GI locations have been analysed at the same time; previously, only one type of cancer, usually colorectal, was studied. The results of the study, involving nearly 14,000 patients, may lead to new insights regarding the use of aspirin in GI cancer say the researchers.

Presenting the results to the 2015 European Cancer Congress, the trial co-ordinator Martine Frouws, MD, from Leiden University Medical Centre, Leiden, The Netherlands, will describe how her team analysed data from 13,715 patients who had been diagnosed with a GI cancer between 1998 and 2011. By linking the data to drug dispensing information from PHARMO, the Institute for Drug Outcomes Research based in Utrecht, the team was able to show an association between aspirin use after a [cancer diagnosis](#) and overall survival (OS); they found there was a significant increase in OS among patients who did take aspirin compared to those who did not.

In total, 30.5% of patients used aspirin pre-diagnosis, 8.3% were solely post-diagnosis users, and 61.1% had not taken aspirin at all. The commonest sites for tumours were colon (42.8% of patients), rectum (25.4%), and oesophagus (10.2%). Median follow-up time for all patients was 48.6 months, with 28% of patients surviving for at least five years. Patients using aspirin after their diagnosis had a chance of survival

twice as high than that of those who did not use it in the same circumstances. The beneficial effect of aspirin use on survival was seen in patients with GI tumours after adjusting for potential confounding factors such as sex, age, stage of cancer, surgery, radiotherapy, chemotherapy and other medical conditions or disorders.

"In most observational studies an 'intention to treat' method (once an aspirin user, always an aspirin user) is used for analysing aspirin's effect. In this study we analysed each separate prescription per patient, and therefore we were able to achieve a more exact estimate of the effect of aspirin on cancer survival. Now we would like to analyse tumour material from these patients to try and discover which ones would benefit from aspirin treatment. Through studying the characteristics of tumours in patients where aspirin was beneficial, we should be able to identify patients who could profit from such treatment in the future," Dr Frouws will say

At present, a multicentre, randomised, placebo-controlled trial is investigating the effect of a daily dose of 80 mg aspirin on OS of elderly patients with colon cancer in The Netherlands. The researchers hope that they will then be able to expand the trial to include further sites in the GI tract, and provide convincing proof that more patients will benefit from aspirin treatment. "Given that aspirin is a cheap, off-patent drug with relatively few side-effects, this will have a great impact on healthcare systems as well as patients," says Dr Frouws.

The scientists believe that the beneficial effect of aspirin in cancer is due to its antiplatelet effect. Platelets are a blood component whose function is to stop bleeding by clumping and clogging blood vessel injuries. Circulating tumour cells (CTCs) are thought to hide themselves from the immune system with the help of the clothing of platelets that surround them. Aspirin inhibits platelet function and therefore allows the immune system to recognise CTCs and eliminate them.

"Medical research is focusing more and more on personalised medicine," Dr Frouws will say, "but many personalised treatments are expensive and only useful in small populations. We believe that our research shows quite the opposite - it demonstrates the considerable benefit of a cheap, well-established and easily obtainable drug in a larger group of patients, while still targeting the treatment to a specific individual."

Professor Peter Naredi, the ECCO scientific co-chair of the Congress, who was not involved in the research, commented: "We have good evidence that the frequent use of aspirin in the population can prevent some cases of colorectal cancer. Now, Dr Frouws and colleagues show that in over 13,000 [patients](#) who were diagnosed with a gastrointestinal cancer, aspirin also improved survival compared with those who did not use it. With more and more data to support the beneficial role of aspirin, we must consider whether we should recommend it to a wider public."

ESMO spokesperson, Professor Nadir Arber, MD, Head of the Integrated Cancer Prevention Center, Tel Aviv Sourasky Medical Center, Israel, who was not involved in the research, said: "Aspirin may serve as the magic bullet because it can target and prevent ischaemic heart disease, [cancer](#) and Alzheimer's disease, the three major health catastrophes in the third millennium.

"Dr Frouws and her colleagues tell us that not only can aspirin prevent disease, but low dose aspirin is important as an adjunct therapy for gastrointestinal cancers. The appropriate dosage and duration of aspirin use and risk/benefit ratios of [aspirin](#) use remain to be determined but, in the area of precision medicine, genetic information and blood and/or urinary biomarkers may help in tailoring treatment to those who will benefit most, while limiting adverse effects."

Provided by ECCO-the European CanCer Organisation

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