

Aspirin may accelerate progression of advanced cancers in older adults

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Results from a recent clinical trial indicate that for older adults with advanced cancer, initiating aspirin may increase their risk of disease progression and early death.

The study, which was conducted by a binational team led by researchers at Massachusetts General Hospital (MGH), the Berman Center in Minnesota, and Monash University in Australia, is published in the *Journal of the National Cancer Institute*.

Compelling evidence from [clinical trials](#) that included predominantly middle-aged adults demonstrates that [aspirin](#) may reduce the risk of developing [cancer](#), especially [colorectal cancer](#). Information is lacking for [older adults](#), however.

To provide insights, investigators designed and initiated the ASPirin in Reducing Events in the Elderly (ASPREE) trial, the first randomized double-blind placebo-controlled trial of daily low-dose aspirin (100 mg) in otherwise healthy older adults. The study included 19,114 Australian and U.S. community-dwelling participants aged 70+ years (U.S. minorities 65+ years) without cardiovascular disease, dementia, or physical disability at the start of the study. Participants were randomized to aspirin or placebo and followed for a median of 4.7 years.

In October 2018, the investigators published a very surprising and concerning report showing an association between aspirin use and an elevated risk of death, primarily due to cancer. The current report now provides a more comprehensive analysis of the cancer-related effects of aspirin in the ASPREE participants. "We conducted this study as a more detailed examination of the effect of aspirin on the development of cancer as well as death from cancer," explained senior author Andrew T. Chan, MD, MPH, Chief of the Clinical and Translational Epidemiology Unit at MGH, Director of Epidemiology at the MGH Cancer Center, and a Professor of Medicine at Harvard Medical School.

Dr. Chan and his colleagues reported that 981 participants who were taking aspirin and 952 who were taking placebo developed cancer. There was no statistically significant difference between the groups for

developing cancer overall or for developing specific types of cancer. Aspirin was associated with a 19% higher risk of being diagnosed with cancer that had spread (or metastasized) and a 22% higher risk of being diagnosed with stage 4, or advanced, cancer, however. Also, among participants who were diagnosed with [advanced cancer](#), those taking aspirin had a higher risk of dying during follow-up than those taking placebo.

"Deaths were particularly high among those on aspirin who were diagnosed with advanced solid cancers, suggesting a possible adverse effect of aspirin on the growth of cancers once they have already developed in older adults," said Dr. Chan. He added that the findings suggest the possibility that aspirin might act differently, at the cellular or [molecular level](#), in older people, which requires further study.

Notably, the vast majority of the study participants did not previously take aspirin before age 70. "Although these results suggest that we should be cautious about starting aspirin therapy in otherwise healthy older adults, this does not mean that individuals who are already taking aspirin—particularly if they began taking it at a younger age—should stop their aspirin regimen," Dr. Chan added.

Provided by Massachusetts General Hospital

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