Report Says New Evidence Could Tip the Balance in Aspirin Cancer Prevention Care

ATLANTA—April 9, 2012—A new report by American Cancer Society scientists says new data showing aspirin's potential role in reducing the risk of cancer death bring us considerably closer to the time when cancer prevention can be included in clinical guidelines for the use of aspirin in preventative care. The report, published early online in Nature Reviews Clinical Oncology, says even a 10% reduction in overall cancer incidence beginning during the first 10 years of treatment could tip the balance of benefits and risks favorably in average-risk populations.

Current guidelines for the use of aspirin in disease prevention consider only its cardiovascular benefits, weighed against the potential harm from aspirin-induced bleeding. While daily aspirin use has also been convincingly shown to reduce the risk of colorectal cancer and recurrence of adenomatous polyps, these benefits alone do not outweigh harms from aspirin-induced bleeding in average-risk populations. But recently published secondary analyses of cardiovascular trials have provided the first randomized evidence that daily aspirin use may also reduce the incidence of all cancers combined, even at low doses (75-100 mg daily).

The current review, led by Michael J. Thun, M.D., vice president emeritus of epidemiology and surveillance research for the American Cancer Society was not designed as a comprehensive review of the literature, but instead is a focused discussion of the key outstanding issues in using aspirin as a cancer prevention tool.\The report says recently published meta-analyses of results from randomized trials of daily aspirin treatment to prevent vascular events have provided provocative evidence that daily aspirin at doses of 75 mg and above might lower both overall cancer incidence and overall cancer mortality.

In six primary prevention trials of daily low-dose aspirin, randomization to aspirin treatment was associated with an approximately 20% reduction in overall cancer incidence between 3 and 5 years after initiation of the intervention (metaodds ratio [OR] = 0.81; 95% CI 0.67–0.98) and a 30% reduction during follow up more than 5 years after randomization (meta-OR = 0.70; 95% CI 0.56–0.88). Cancer mortality was also reduced during study follow up that happened more than 5 years after the start of aspirin use (meta-OR = 0.63; 95% CI 0.49–0.82) in analyses that included 34 trials of daily aspirin at various doses. Surprisingly, the size of the observed benefit did not increase with daily doses of aspirin above 75–100 mg. Notably, these meta-analyses excluded results from the Women's Health Study (WHS), a large 10-year-long trial of 100 mg of aspirin taken every other day, which reported no reduction in cancer incidence or mortality.

"The accumulating data from randomized clinical trials provide an exciting opportunity to reconsider the potential role of aspirin in cancer prevention," write the authors. They say several important questions remain unanswered, such as the exact magnitude of the overall cancer benefit and which individual cancer sites contribute to this benefit. "However, these new data bring us considerably closer to the time when cancer prevention can be integrated into the clinical guidelines for prophylactic treatment following regulatory review by the FDA and the European Medicines Agency."

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