S37. Aspirin and NSAID's in prevention of colorectal cancers: The evidence

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The potential for non-steroidal anti-inflammatory drugs to reduce the risk of colorectal neoplasia was first recognized through case reports suggesting that sulindac might lower the numbers of polyps in patients with familial adenomatous polyposis (FAP). Subsequent randomized trials have confirmed that several NSAIDs (including sulindac) do indeed cause regression of colorectal adenomas in FAP. Anti-neoplastic effects have also been amply demonstrated for sporadic large bowel neoplasia. A large number of observational studies have documented an inverse association between use of Aspirin (and other NSAIDs) and the risk of colorectal adenomas and colorectal cancer. These data indicate that high (anti-inflammatory) doses are not required for a reduction in risk, but that sustained use is needed and that the effect begins after a latent period of about 10 years or so. Furthermore, several randomized trials of Aspirin have documented that Aspirin reduces the risk of adenomas with just a few years of use. A combined analysis of two English trials showed a substantial reduction in the risk of colorectal cancer that began about 10 years after randomization. Preclinical studies have confirmed this anti-neoplastic effect in a variety of animal models of large bowel cancer.

Thus the evidence that NSAIDs interfere with carcinogenesis in the large bowel is clear. Nonetheless, several uncertainties remain: (1) the magnitude of the chemopreventive effect in different risk settings, (2) the dose–response pattern of the effect, and (3) (in view of the likely toxicities of NSAIDs) the cost-effectiveness of these agents for prevention.