Purpose: In a recent analysis of a large clinical database, postdiagnosis aspirin use was associated with 57% lower prostate cancer-specific mortality (PCSM) among men diagnosed with nonmetastatic prostate cancer. However, information on this association remains limited. We assessed the association between daily aspirin use and PCSM in a large prospective cohort.

Patients and Methods: This analysis included men diagnosed with nonmetastatic prostate cancer between enrollment in the Cancer Prevention Study-II Nutrition Cohort in 1992 or 1993 and June 2009. Aspirin use was reported at enrollment, in 1997, and every 2 years thereafter. During follow-up through 2010, there were 441 prostate cancer deaths among 8,427 prostate cancer cases with information on prediagnosis aspirin use and 301 prostate cancer deaths among 7,118 prostate cancer cases with information on postdiagnosis aspirin use.

Results: Compared with no aspirin use, neither prediagnosis nor postdiagnosis daily aspirin use were statistically significantly associated with PCSM (prediagnosis use, multivariable-adjusted hazard ratio (HR) = 0.92, 95% CI 0.72 to 1.17, postdiagnosis use, HR = 0.98; 95% CI, 0.74 to 1.29). However, among men diagnosed with high-risk cancers (≥ T3 and/or Gleason score ≥ 8), postdiagnosis daily aspirin use was associated with lower PCSM (HR = 0.60; 95% CI, 0.37 to 0.97), with no clear difference by dose (low-dose, typically 81 mg per day, HR = 0.50; 95% CI, 0.27 to 0.92, higher dose, HR = 0.73; 95% CI, 0.40 to 1.34).

Conclusion: A randomized trial of aspirin among men diagnosed with nonmetastatic prostate cancer was recently funded. Our results suggest any additional randomized trials addressing this question should prioritize enrolling men with high-risk cancers and need not use high doses.

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PMID: 25332245 [PubMed - in process]