

Coronary Artery Disease in REDUCE - Letter

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In a *post hoc* hypothesis-developing secondary analysis, Thomas and colleagues found that coronary artery disease was associated with a 35% increased risk of prostate cancer diagnosis (1). Thomas and colleagues suggest that if this association is confirmed in future studies, further analysis of this relationship and the potential biologic mechanisms by which coronary artery disease mediates this augmentation in prostate cancer risk are warranted. We have analyzed the correlation of prostate cancer death rates in 50 U.S. states and the District of Columbia with deaths from heart disease. Our analysis confirms the finding of Thomas and colleagues.

Data on prostate cancer mortality are from Table 2.23.1.2M, Prostate. Age-Adjusted Cancer Death Rates and 95% Confidence Intervals by U.S. Census Region and Division, State, and Race and Ethnicity, United States, United States Cancer Statistics (USCS) 2007, Cancer Types Grouped by State and Region (<http://apps.nccd.cdc.gov/uscs/cancersbystateandregion.aspx>).

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References

1. Thomas JA, Gerber L, Banez LL, Moreira DM, Rittmaster RS, Andriole GL, et al. Prostate cancer risk in men with baseline history of coronary artery disease: results from the REDUCE study. *Cancer Epidemiol Biomarkers Prev* 2012;21:576–81.
2. Heron M, Hoyert DL, Murphy SL, Xu J, Kochanek KD, Tejada-Vera B. Deaths: final data for 2006. *Natl Vital Stat Rep* 2009;57:1–134.
3. Pienta KJ, Esper PS. Risk factors for prostate cancer. *Ann Intern Med* 1993;118:793–803.

Data on age adjusted deaths from heart disease are from Table 29: Deaths: Final Data for 2006. National Vital Statistics Reports (2). Data on race distribution by state are from the U.S. Census, 2010 (<http://2010.census.gov/2010census/data/>).

There was a significant correlation between prostate cancer mortality and heart disease mortality ($r = 0.314$, $P = 0.027$). Because the incidence of prostate cancer is lower in whites than in blacks (3), multivariate linear regression was conducted with prostate cancer mortality as the dependent variable, heart disease mortality, and percentage of white population by state as independent variables. The correlation between prostate cancer mortality and heart disease mortality was significant ($P = 0.038$), controlling for the effect of race ($P = 0.811$).

Hypothetically, there are common causes of coronary artery disease and prostate cancer, and the 50 U.S. States and District of Columbia differ in the extent of the common causes. If these common causes can be substantiated, measures known to reduce coronary artery disease might also reduce prostate cancer risk.

Disclosure of Potential Conflicts of Interest

No potential conflicts of interest were disclosed by the authors.

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