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**Risk for Suicide, Cardiovascular Death May Be Increased After Prostate Cancer Diagnosis**

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February 10, 2010 — The risk for suicide and cardiovascular disease may be increased in the years after prostate cancer diagnosis, according to the results of a large cohort study reported Online First February 2 and will appear in the March 3 print issue of the *Journal of the National Cancer Institute.*

"Receiving a cancer diagnosis is a stressful event that may increase risks of suicide and cardiovascular death, especially soon after diagnosis," write Fang Fang, MD, from Brigham and Women's Hospital, Harvard Medical School in Boston, Massachusetts, and colleagues.

The study cohort consisted of 342,497 men diagnosed with prostate cancer from January 1, 1979, through December 31, 2004, who were identified by use of the Surveillance, Epidemiology, and End Results Program. Participants were followed up from the date of prostate cancer diagnosis to the end of the first 12 calendar months after diagnosis.

The investigators compared relative risks for suicide and cardiovascular death in the first year and months after a prostate cancer diagnosis. After adjustment for age, calendar period, and state of residence, relative risks were calculated as standardized mortality ratios (SMRs) by comparing incidence rates among prostate cancer patients vs those in the overall US male population. Analyses were further stratified by calendar period at diagnosis, tumor characteristics, and other relevant variables.

Suicide mortality rate during follow-up was 0.5 per 1000 person-years (148 deaths), and cardiovascular mortality rate was 21.8 per 1000 person-years (6845 deaths). During the first year after diagnosis, patients with prostate cancer were at increased risk for suicide (SMR, 1.4; 95% confidence interval [CI], 1.2 - 1.6), particularly during the first 3 months (SMR, 1.9; 95% CI, 1.4 - 2.6). Risk was increased before prostate specific antigen (PSA) testing was in widespread use (1979-1986) and at approximately the time it became available (1987-1992). Once PSA testing was in widespread use, however (1993-2004), suicide risk was no longer increased.

During the first year after diagnosis, the risk for cardiovascular death was slightly elevated (SMR, 1.09; 95% CI, 1.06 - 1.12), especially during the first month (SMR, 2.05; 95% CI, 1.89 - 2.22). During the entire study period, first-month risk was statistically significantly elevated, irrespective of PSA availability. Risk for cardiovascular death was greater in patients with metastatic tumors (SMR, 3.22; 95% CI, 2.68 - 3.84) vs those with local or regional tumors (SMR, 1.57; 95% CI, 1.42 - 1.74).

"A diagnosis of prostate cancer may increase the immediate risks of suicide and cardiovascular death," the study authors write. "In the present study, we observed an elevated risk of suicide in the pre-PSA and peri-PSA eras but not in the PSA era."

Limitations of this study include lack of a cancer-free reference group; potential confounders; lack of data on other prevalent disorders before cancer diagnosis; and inability to exclude the possibility that prostate cancer treatments, such as hormonal therapy or surgery, might cause excess cardiovascular events.

"We believe that suicide and cardiovascular death reflect only the tip of the iceberg of anxiety, mood disturbance, and perhaps other mental illness (or suffering) after a prostate cancer diagnosis," the study authors conclude. "Hence, our study suggests the potential importance of providing emotional counseling and support for patients newly diagnosed with cancer. It also adds to the increasingly complex scenario of pros and cons of extensive PSA testing, which entails detection of large numbers of nonlethal prostate cancers."

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