

# Higher risk for heart disease and diabetes associated with androgen deprivation therapy

December 7 2009

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Men of all ages treated for prostate cancer with androgen deprivation therapy, specifically with gonadotropin-releasing hormone agonists (GnRH), have an increased risk of diabetes and cardiovascular disease, according to a new study published online December 7 in the *Journal of the National Cancer Institute*.

Previous studies indicate that older men who take androgen deprivation therapy for [prostate cancer](#) are at an increased risk for diabetes and cardiovascular disease, but the relationship between the two among men of all ages is unclear.

Nancy L. Keating, M.D., MPH, of the Division of General Internal Medicine, Department of Medicine, Brigham and Women's Hospital in Boston, and colleagues conducted an observational study of almost 38,000 men of all ages who were diagnosed with local or regional prostate cancer in the Veterans Healthcare Administration from January 2001 through December 2004, with follow-up through December 2005.

Cox proportional hazards models were used to assess whether androgen deprivation therapy with GnRH agonists, oral antiandrogens (drugs that block the action of hormones), the combination of the two, or orchiectomy (removal of the testicles) were associated with diabetes, coronary heart disease, myocardial infarction, [sudden cardiac death](#), or stroke, after adjustment for patient and tumor characteristics.

Treatment with GnRH agonists was associated with statistically

significant increased risks of incident diabetes (for GnRH agonist therapy, 159.4 events per 1,000 person-years versus 87.5 events for no androgen deprivation therapy).

"Additional research is needed to understand the effects of GnRH agonists for clinical settings where benefits have not yet been established, to identify populations of men at highest risk of complications associated with GnRH agonists, and to investigate strategies to prevent treatment-related morbidity," the authors write. "Nevertheless, patients and physicians considering initiation of GnRH agonist treatment for local or regional prostate cancer should factor the potential increased risks of diabetes and [cardiovascular disease](#) as they make treatment decisions."

In an accompanying editorial, Peter Albertsen, M.D., University of Connecticut Health Center in Farmington, said this study adds to the growing body of literature on androgen deprivation therapy. The researchers gave a glimpse into the extent of therapy side effects for contemporary patients, including men younger than 55 and older than 75 years, according to Albertsen.

"With the growing number of [men](#) wrestling with rising PSA [prostate-specific antigen] values after treatment, we should organize appropriate trials and reflect carefully about the anticipated benefits and harm before initiating ADT treatment," the editorialist writes.

Source: [Journal of the National Cancer Institute](#) ([news](#) : [web](#))

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