

# Prostate cancer survivors' risk of heart disease studied

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Micrograph showing prostatic acinar adenocarcinoma (the most common form of prostate cancer) Credit: Wikipedia, [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/)

The 3 million prostate cancer survivors in the United States are likely to die from something other than cancer, thanks to early detection, effective treatment and the disease's slow progression.

What survivors need to be more concerned with is heart disease, the most common non-cancer cause of death for [men](#) with prostate cancer,

according to a paper published this week in *Circulation*, authored by Vanderbilt physicians.

For this reason, Vanderbilt's Cardio-oncology program is focusing on modulating the risk factors for [cardiovascular disease](#) in men, especially those receiving [androgen deprivation therapy](#) (ADT) to treat their prostate cancer.

"While ADT therapy is of great benefit to many patients with prostate cancer, it may also increase the risk of developing diabetes or having a heart attack or stroke. By collaborating with urology, medical oncology and the cardio-oncology program, we are better able to determine which patients are most likely to benefit from hormones, and in those who do get hormones, how to better protect their cardiovascular system," said Eric Shinohara, M.D., MSCI, associate professor of Medicine and medical director of the Vanderbilt Radiation Oncology Clinic.

ADT reduces serum testosterone levels, which can make [prostate cancers](#) shrink or grow more slowly. In 2010 the American Heart Association released a statement about the possible association between ADT and adverse cardiovascular events.

Specifically, there appears to be an association between ADT and increased low-density lipoprotein and triglyceride levels, increased fat and decreased lean body mass, increased insulin resistance and decreased glucose tolerance, and a general metabolic state similar to metabolic syndrome, according to the *Circulation* paper.

"Aggressive treatment of these altered [cardiovascular risk](#) factors can be an important step to decrease the risk of heart attack and stroke in patients treated with ADT," said senior author Javid Moslehi, M.D., assistant professor of Medicine and director of Vanderbilt's Cardio-oncology program.

"In general, cardiovascular wellness is an important aspect of care for all of the nearly 230,000 men newly diagnosed with prostate cancer each year in the U.S."

Cardiovascular disease is the No. 1 killer of all men in the United States whether they have prostate cancer or not, so it's important for men to understand the elevated risk associated with ADT, said David Penson, M.D., MPH, who is also an author of the paper.

"Frankly, all men need to be cognizant of the cardiovascular risk. After all, a lot more men die of heart disease than prostate cancer every year in this country. It is particularly important for men on ADT since anything that affects the hormonal balance will impact cardiovascular risk," said Penson, the Paul V. Hamilton, M.D. and Virginia E. Howd Professor of Urologic Oncology.

Vanderbilt's Cardio-oncology program is rare in its collaborative, multi-specialty care of men with prostate cancer, said Moslehi, who helped develop the Vanderbilt ABCDE paradigm for cardiovascular health in [cancer survivors](#), an algorithm that is now being adapted as part of national cancer survivorship guidelines by National Comprehensive Cancer Network (NCCN).

The ABCDE algorithm for prostate cancer survivors includes awareness and aspirin; blood pressure monitoring; cholesterol management and cigarette avoidance; diet and diabetes; and exercise. Patient education is a shared responsibility of the multiple specialists who comprise the cardio-oncology program.

"Collaboration among subspecialties in medicine is critical to maintaining the health of our patients. No one is simply a prostate or a heart, and the treatments we use to treat one illness or another can dramatically affect the well-being of other parts of a patient. Bringing

together a comprehensive team that addresses all facets of a patient's health allows us to provide the best medical care there is," said oncologist Alicia Morgans, M.D., MPH, assistant professor of Medicine, and also an author of the *Circulation* paper.

Provided by Vanderbilt University Medical Center

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