

In Teens and Young Men, Prostate Cancer on the Rise

Nick Mulcahy

November 25, 2019

Prostate cancer incidence in older adolescent and young adult men has increased in most countries, but the cause for the rise is uncertain, according to a new study [published online September 25](#) in the journal *Cancer*.

"Men as young as 17 years are experiencing an increasing incidence of carcinoma of the prostate in much of the world," write an international team of authors, led by Archie Bleyer, MD, Oregon Health and Science University's Knight Cancer Institute in Portland.

They report that the incidence of prostate cancer has increased in all groups between ages 15 and 40 years and increased globally at a steady rate averaging 2% per year since 1990 ($P < .01$).

However, prostate cancer is rare in young men, with incidence rates not rising above about 0.2 cases per 100,000 men until age 35 and being even lower at younger ages, per US data from the last two decades; notably, the rate spikes dramatically between ages 35 and 39, approaching 1.8 cases.

However, at age 70, the rate is about 800 per 100,000 men.

Notably, in the United States, young men were >6 times more likely than older men (age 41 years and older) to have metastatic disease at diagnosis. They also had very poor 5-year survival rates, the study found.

The incidence increase is "disturbing" and the potentially related factors are "poorly understood," said Suzanne M. Miller, PhD, professor of cancer prevention and control, Fox Chase Cancer Center/Temple University Health System, Philadelphia, Pennsylvania, in an email to *Medscape Medical News*.

Miller, who was not involved in the study, also observed that similar increases have occurred in [colorectal cancer](#) among young adults.

The new findings are novel with regard to geographic scope. However, previously, a group of American researchers found an increasing incidence in prostate cancer in men ages 20 to 49 years, in a study limited to the US (*Nat Rev Urol*. 2014;11:317-323).

Both US and Global Data

The new study is based on US data from the Surveillance, Epidemiology, and End Results (SEER) program and on global data from the Institute for Health Metrics and Evaluation's Global Burden of Disease resource. Findings in the new study encompass North, South, and Central America (the Americas), Europe, Asia, and Africa.

From 1990 to 2017, prostate cancer incidence in three age groups (25-29; 30-34; and 35-39) has "steadily increased" in all four study regions, the authors report.

Notably, the mortality rate of prostate cancer in these age groups did not mimic the incidence trend in any of these regions, having decreased or remained stable. There were some exceptions for 2016 and 2017, the most recent years of available data, during which the death rate increased in some regions and age groups.

There are a lot of unknowns about the incidence increase of prostate cancer in young men — including its cause, say the authors.

They cite a long list of possible reasons for the increase, some linked to observational evidence and some not. One associated factor in the US will be familiar to observers of prostate cancer trends: prostate-specific antigen (PSA) testing.

The authors point to a recent study that found that from 2000 through 2015 in the US, 2% of men aged 30 to 39 and 5% to 6% of those aged 40 to 49 years who had health insurance were screened with PSA tests, "contrary to all existing practice guidelines." (Am J Clin Pathol. 2018;149(suppl 1):S155)

However, they also say that these youngish men "likely" had PSA tests due to family history, genetic risk, or clinical symptoms.

What is certain to the researchers is that young American men with prostate cancer have dire survival rates.

Using 2000–2015 SEER data, the authors report: "Whereas the overall 5-year relative survival rate in the United States for men diagnosed between ages 40 and 80 years was between 95% and 100%, it was 30% in those aged 15 to 24 years, 50% in those aged 20 to 29 years, and 80% in those aged 25 to 34 years."

Unfortunately, despite these findings, it is not currently known "how the biology of these cancers differs from that in older men," the investigators also say.

In the US, the Centers for Disease Control and Prevention (CDC) has acknowledged the problem of increased incidence among males aged 15 to 39 years and has called for further investigation, including of the related biology, observe the study authors.

Writing in the discussion section of the new article and citing 2000–2015 SEER data, the authors comment that most men diagnosed with prostate cancer before age 40 have localized disease at diagnosis. Interestingly, compared to older men, they also have a lower proportion of high-grade tumors but are more likely than older men to be diagnosed with metastatic disease, as noted above.

Young men's tumors are usually undifferentiated, metastasize early, have lytic rather than sclerotic [bone metastases](#), and respond poorly to hormonal therapies, the authors also write, citing other research.

The authors speculate that the increase in global incidence might be tied to a variety of health trends, including ones in [obesity](#), physical inactivity, [human papillomavirus](#) infection, substance exposure, environmental carcinogens, and/or referral patterns.

<https://www.medscape.com/viewarticle/921792>