DEPARTMENT OF HEALTH

Prostate Cancer in Minnesota

FACTS AND FIGURES

About prostate cancer

The prostate gland is part of the male reproductive system. The prostate produces and secretes prostatic fluid carried in semen. Almost all prostate cancers start when cells in the gland grow out of control. Prostate cancer most often does not have any symptoms but can be detected by a prostate specific antigen (PSA) test.

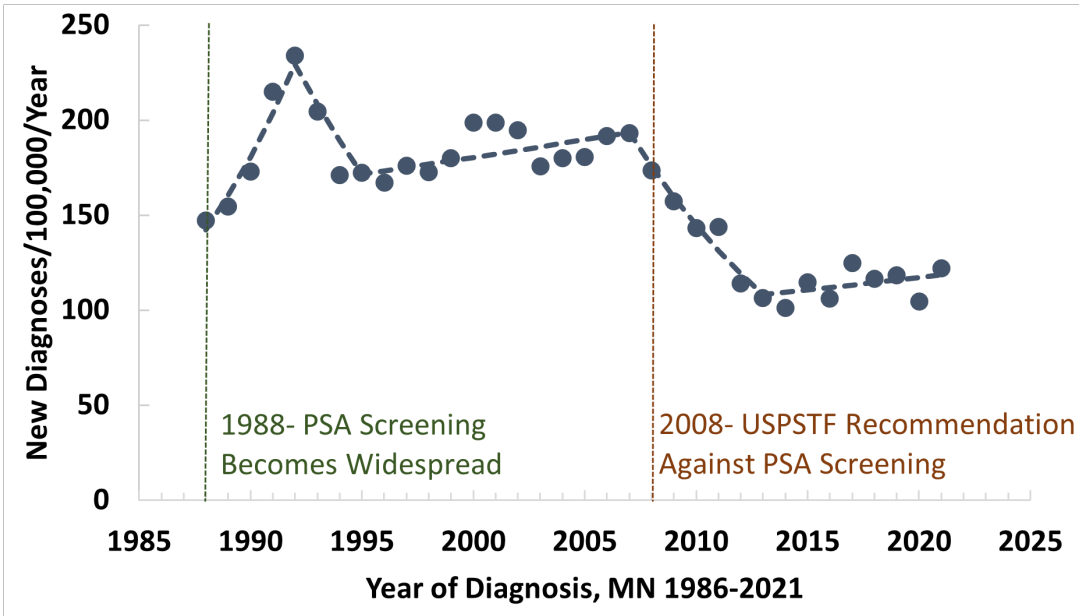
Most prostate cancers are slow growing. However, a small percentage of prostate cancers are aggressive, progress quickly to advanced stage, and are often fatal. This cancer is the leading cancer diagnosis in Minnesota males and the second leading cause of cancer death.

Screening

The Centers for Disease Control and Prevention recommends that men talk with their doctor about the possible benefits and harms of screening, diagnosis, and treatment, and decide whether to be screened.[1] Two populations at high risk for prostate cancer are African American males and those with a family history of prostate cancer.[2]

Prostate cancer trends

Prostate cancer incidence (new diagnoses) fluctuated widely since 1988, reflecting changes in prostate cancer screening practices and recommendations.

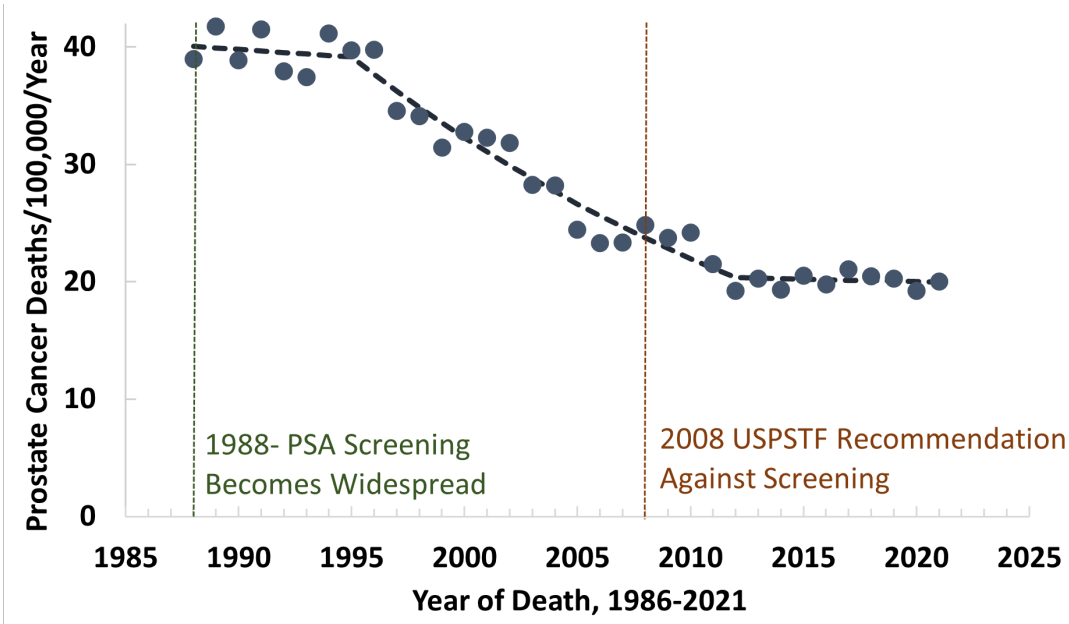


Annual age-standardized incidence rates with dashed trend lines.
Vertical lines represent key events influencing trends.

Prostate cancer incidence has fluctuated widely since the U.S. Food and Drug Administration approved the PSA test for prostate cancer screening in 1986. The test was adopted into widespread clinical practice soon after approval. Prostate cancer incidence rates quickly rose as the test detected large numbers of latent, previously undiagnosed cases[3]. Rates nationally peaked in 1991. Over the next two decades scientific evidence accumulated to show that PSA testing, diagnosis, and treatment led to only minimal reductions in prostate cancer mortality but had potential to cause substantial harm.[4,5] In response, the U.S. Preventive Services Task Force in 2008 recommended against PSA testing of men 75 or more years of age[4] and in 2012 extended the recommendation against testing to men of all ages.[5] Prostate cancer incidence in Minnesota declined sharply immediately after the 2008 recommendation, falling by nearly half (-45%) between 2008 and 2013.

From 2013 to 2021 the **overall** prostate cancer incidence rate neither increased nor decreased. However, in 2010 rates of **distant** stage prostate cancer began increasing sharply, more than doubling from 6.3 to 14.3/100,000/year between 2010 and 2021.

Prostate cancer death rates dropped by half between 1995 and 2012 but are no longer falling.



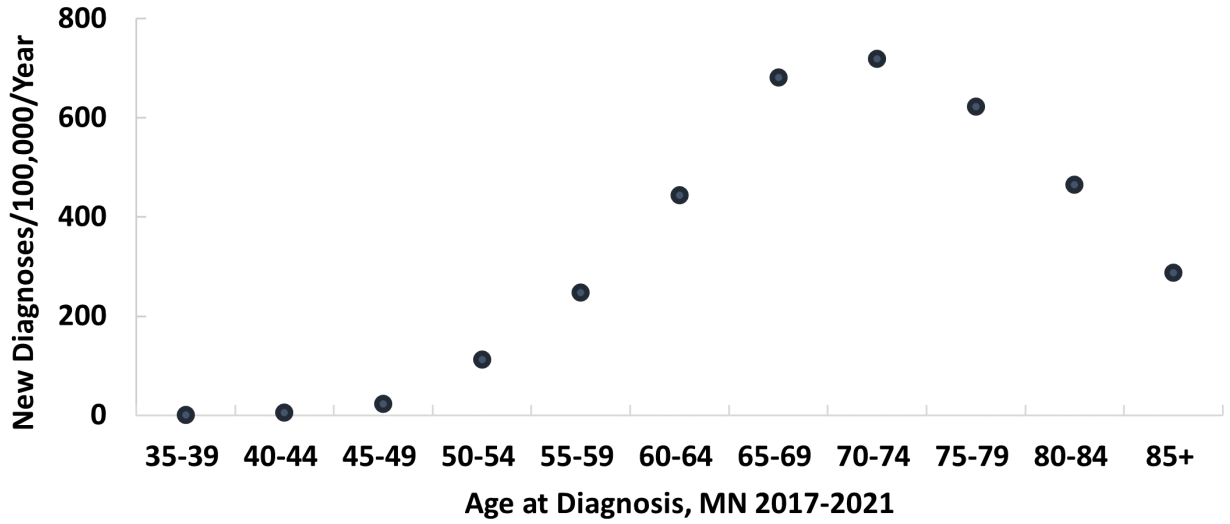
Age-standardized mortality rates with trend lines.
Vertical lines represent key events influencing rates.

Minnesota's prostate cancer mortality rate gradually increased through the 1970s and 80s to peak at a high level in 1994 (complete data not shown). Between 1994 and 2013 the mortality rate dropped by half (50%). However, progress has since stalled; prostate cancer mortality rates were unchanged from 2013 to 2021.

Prostate cancer burden in Minnesota

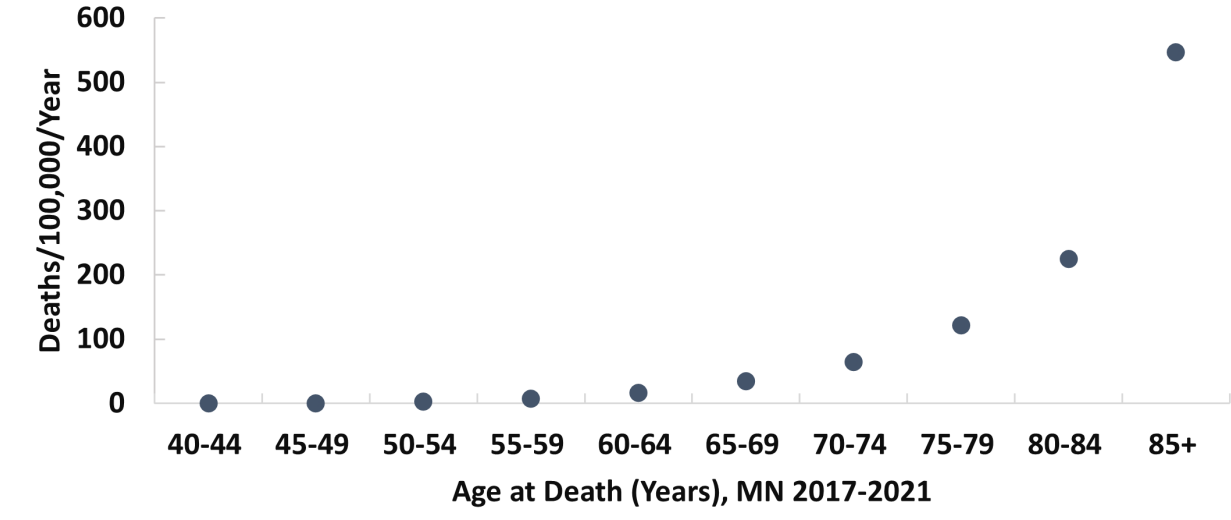
An average of 4,210 prostate cancers were diagnosed annually in Minnesota between 2017 and 2021. This represents an age-adjusted incidence rate of 117.1 newly diagnosed cases per 100,000 per year. Over this period, an average of 585 males died of prostate cancer annually. This represents an age-adjusted mortality rate of 20.2 deaths per 100,000 per year.

Prostate cancer incidence (new diagnoses) peaks around 70 to 74 years of age.



Age-Specific Incidence Rates for 5-Year Age Groups

Prostate cancer mortality (deaths) increases with age.



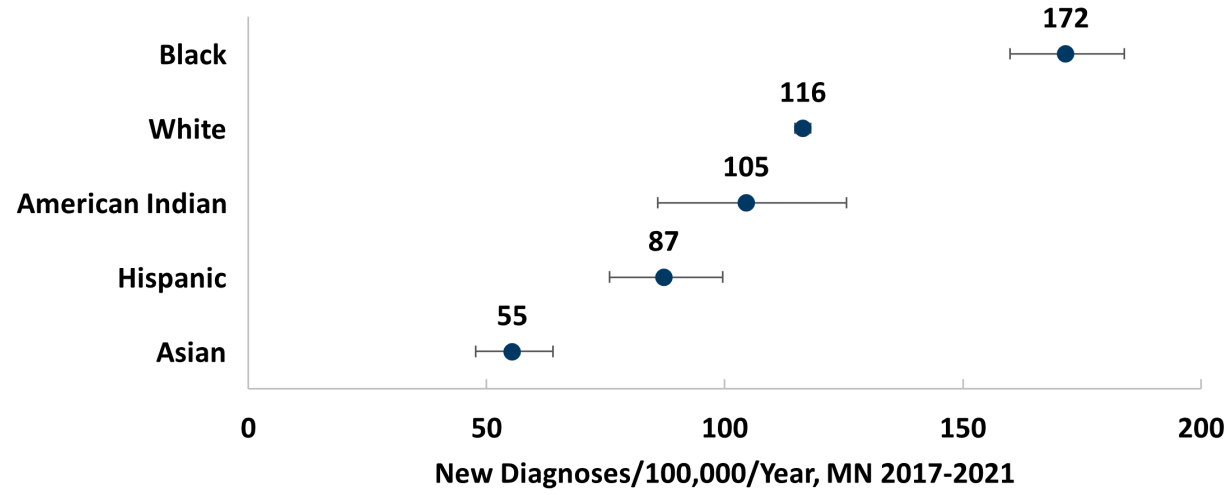
Age-Specific Mortality Rates by 5-Year Age Group

Prostate cancer stage at diagnosis

The SEER Summary Stage system classifies cancers according to how far they have spread in the body at the time of diagnosis. The majority (69%) of prostate cancers are diagnosed at the local stage, 19% at regional stage and 6% at distant stage. However, males 65 years of age and older are more likely to be diagnosed with distant stage cancer than males younger than 65 years.

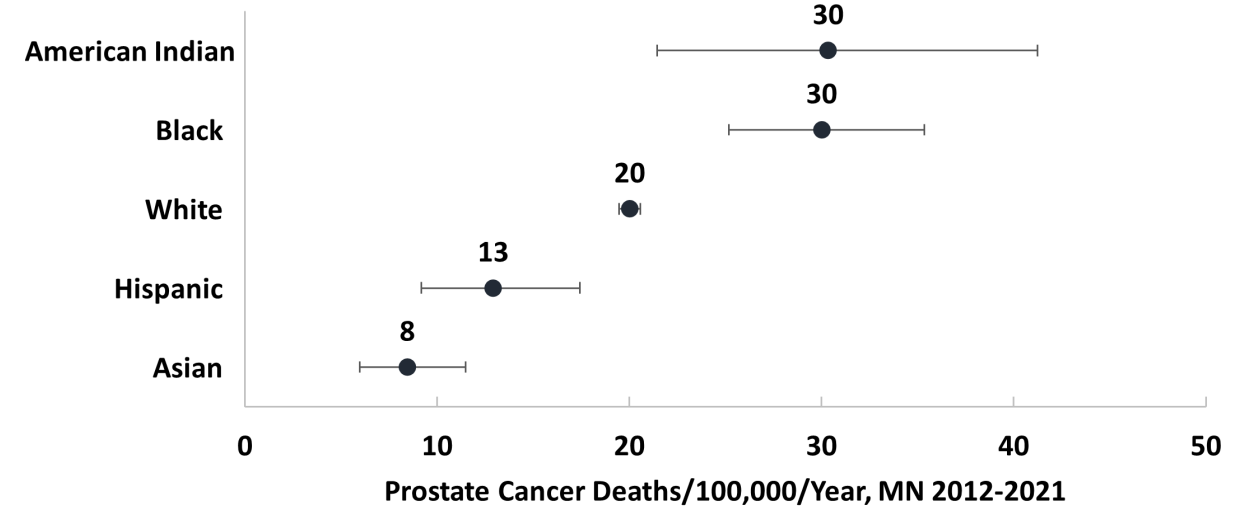
Prostate cancer differences by race/ethnicity

Prostate cancer incidence is highest in Black males.



Prostate Cancer Incidence Rates and 95% Confidence Intervals

Prostate cancer mortality is highest in Black and American Indian males.



Age-Standardized Mortality Rates and 95% Confidence Intervals

Prostate cancer in the Twin Cities metro vs. non-metro

Between 2017 and 2021, the rate for prostate cancer incidence was 8% higher in the seven-county Twin Cities metro area than in the non-metro (118 vs. 110 new diagnoses/ 100,000/ year). However, the mortality rate was 12% higher in the non-metro (21.3 vs. 18.9 deaths/100,000/year) during this period.

Prostate cancer prevalence (survivors)

Cancer prevalence estimates the number of people in a population who have ever been diagnosed with cancer and remain alive as of a given calendar date. As of Jan. 1, 2021, an estimated 55,600 males in Minnesota were living with a prostate cancer diagnosis. Males with prostate cancer account for a large percentage (38%) of all male cancer survivors in Minnesota.

Prostate cancer survivors can experience various physical and emotional side effects from cancer and its treatment. Some of these effects include urinary, erectile, and bowel dysfunction; bone fractures and osteoporosis; depression or anxiety; and second cancers.[6] Cancer survivor care plans are available to survivors and primary care providers to assess and manage these and other effects.[7-9]

References

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