

XI. Prostate Cancer

Prostate cancer overview

- Among men, prostate cancer is the most commonly diagnosed cancer (excluding non-melanoma skin cancer) and the second leading cause of cancer death in the United States.¹ One in seven men will be diagnosed with prostate cancer during their lifetime.²
- Prostate cancer has a five-year relative survival rate of about 100.0 percent if diagnosed in its earliest (local) stage.² In Virginia, 79.4 percent of prostate cancer diagnosed was at the local stage.³
- In Virginia, there were 1,644 inpatient hospitalizations in 2011 for prostate cancer, at a total cost of over \$71.8 million. The average length of stay was 2.1 days and the average charge per stay was \$43,682.⁴
- Although the value of PSA screening is under debate, according to the 2012 BRFSS survey data, 46.5 percent of Virginia men 50 years and older reported having had a Prostate-Specific Antigen (PSA) screening test in the previous two years (U.S. average, 45.2%).⁵
- Also from the 2012 BRFSS survey data, 18.2 percent of men over age 40 with an annual income of \$15,000 or less had a PSA screening in 2012.⁵

¹ American Cancer Society. Cancer Facts & Figures 2013. Atlanta: American Cancer Society; 2013.

² Howlader N, Noone AM, Krapcho M, Garshell J, Neyman N, Altekruse SF, Kosary CL, Yu M, Ruhl J, Tatalovich Z, Cho H, Mariotto A, Lewis DR, Chen HS, Feuer EJ, Cronin KA (eds). *SEER Cancer Statistics Review, 1975-2010*, National Cancer Institute. Bethesda, MD, http://seer.cancer.gov/csr/1975_2010/, based on November 2012 SEER data submission, posted to the SEER web site, 2013.

³ Virginia Cancer Registry. Based on combined 2006-2010 data. Percent of Local Stage cancers reported using the Derived Summary Staging System.

⁴ VDH Virginia Health Information Hospital Discharge Patient-Level Dataset, 2011.

⁵ Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey data*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2012.

Table 9.1 Prostate cancer data by race, incidence (2006-2010) & mortality (2007-2011)

	State of Virginia		African-American Men	White Men
Incidence ¹	Count	28,516	6,947	20,475
	Rate per 100,000	150.9	233.6	13 ⁵ .2
	95% CI	149.0-152.7	228.0-239.5	133.0-137.1
Staging ¹	% Local Stage	79.4	80.0	79.3
Mortality ²	Count	3,466	1,041	2,382
	Rate per 100,000	23.5	48.8	19.8
	95% CI	22.7-24.3	45.8-51.7	19.0-20.6

According to Table 9.1:

- During the time period 2006-2010, the incidence rate of prostate cancer was 150.9 cases per 100,000 men in Virginia¹ (U.S. rate, 147.5 cases per 100,000 men).³
- During the time period 2007-2011, the mortality rate from prostate cancer was 23.5 deaths per 100,000 men in Virginia² (U.S. rate, 23.0 deaths per 100,000 men per year).⁴
- Incidence rates were about 1.7 times greater in African-American men compared to White men in Virginia.¹
- Mortality rates were about 2.5 times greater in African-American men compared to White men in Virginia.²
- The percentage of prostate cancer cases diagnosed at the local stage was similar for both Whites and African-Americans in Virginia.¹

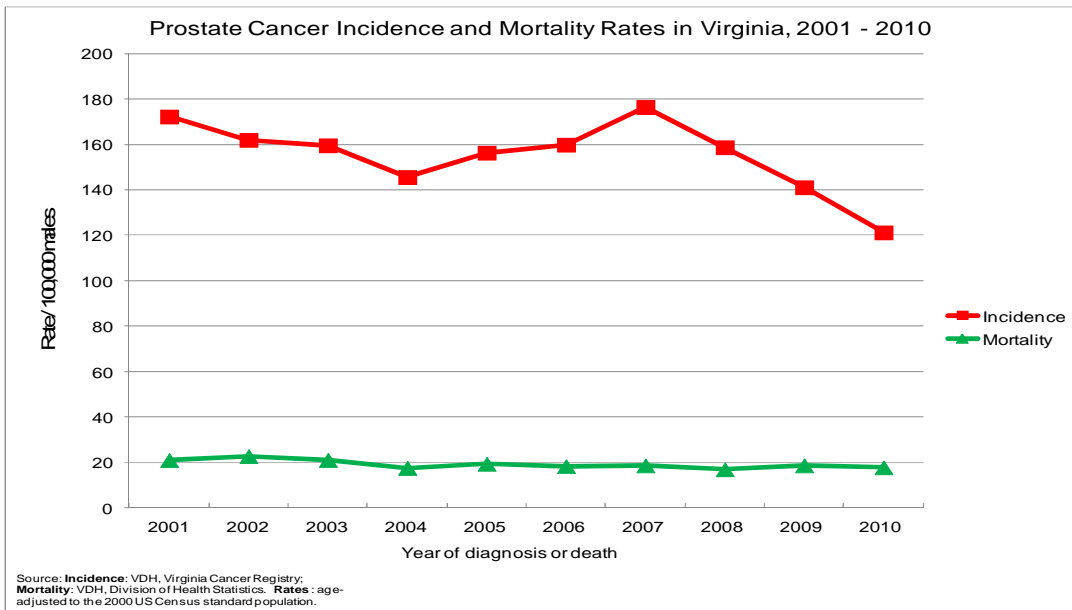
¹ Virginia Cancer Registry. Based on combined 2006-2010 data. Incidence rates are age-adjusted to the 2000 U.S. standard population; Percent of Local Stage cancers reported using the Derived Summary Staging System.

² VDH Division of Health Statistics. Based on combined 2007-2011 data. Mortality rates are age-adjusted to the 2000 U.S. standard population.

³ Copeland G, Lake A, Firth R, Wohler B, Wu XC, Stroup A, Russell C, Zakaria D, Miladinovic Z, Schymura M, Hofferkamp J, Kohler B (eds). *Cancer in North America: 2006-2010. Volume One: Combined Cancer Incidence for the United States, Canada and North America*. Springfield, IL: North American Association of Central Cancer Registries, Inc., 2013: [http://www.naaccr.org/LinkClick.aspx?fileticket=g-02rL1IRDU%3d%tabid-93\\$mid=43](http://www.naaccr.org/LinkClick.aspx?fileticket=g-02rL1IRDU%3d%tabid-93$mid=43). Accessed November 5, 2013.

⁴ Howlader N, Noone AM, Krapcho M, Garshell J, Neyman N, Altekruse SF, Kosary CL, Yu M, Ruhl J, Tatalovich Z, Cho H, Mariotto A, Lewis DR, Chen HS, Feuer EJ, Cronin KA (eds). *SEER Cancer Statistics Review, 1975-2010*, National Cancer Institute. Bethesda, MD, http://seer.cancer.gov/csr/1975_2010/, based on November 2012 SEER data submission, posted to the SEER web site, 2013.

Chart 9.1 Prostate cancer incidence and mortality rates chart, by year, 2001-2010



Incident cases of prostate cancer diagnosed among Virginians varied between 2001 and 2010. The rate declined from 2001 (172.3 cases per 100,000) to 2004 (145.6 per 100,000). The rate then rose for three years in a row, reaching a peak of 176.5 per 100,000 men in 2007¹ before declining again. The U.S. Preventive Services Task Force (USPSTF) made recommendations in 2008 and 2011 regarding prostate cancer screening behaviors that can affect incidence rates. The 2011 statement is: “The USPSTF recommends against prostate-specific antigen (PSA)-based screening for prostate cancer...”² Instead, the USPSTF recommends carefully monitoring prostate cancer post-diagnosis, because some men can suffer more health consequences as a result of regular prostate screening and other attendant medical procedures. According to a Cochran-Armitage trend analysis, the prostate cancer incidence rate trend did not change significantly over the 10 year period.

The mortality rate for prostate cancer in Virginia decreased overall between 2001 and 2010, from 21.0 deaths per 100,000 men to 17.8 deaths per 100,000. The steady decline in prostate cancer mortality in Virginia is part of a national trend.³ According to the National Cancer Institute, “Mortality rates for prostate cancer also have declined since the mid-1990s.”⁴ A Cochran-Armitage trend analysis shows that the prostate cancer mortality rate has significantly decreased over the 10 year period.

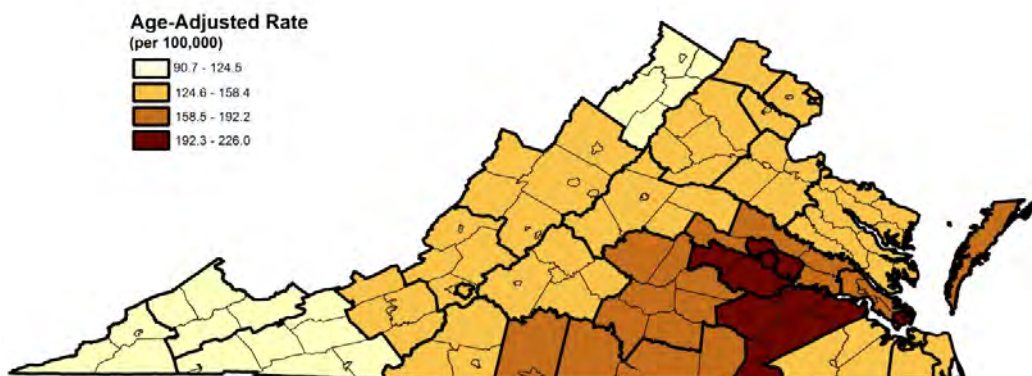
¹ Virginia Cancer Registry. Based on combined 2006-2010 data. Incidence rates are age-adjusted to the 2000 U.S. standard population.

² Screening for Prostate Cancer. U.S. Preventive Services Task Force Recommendation Statement, Release Date: May 2012. <http://www.uspreventiveservicestaskforce.org/prostatecancerscreening/prostatefinalrs.htm#summary> (accessed 10/18/13).

³ VDH Division of Health Statistics. Based on combined 2007-2011 data. Mortality rates are age-adjusted to the 2000 U.S. standard population.

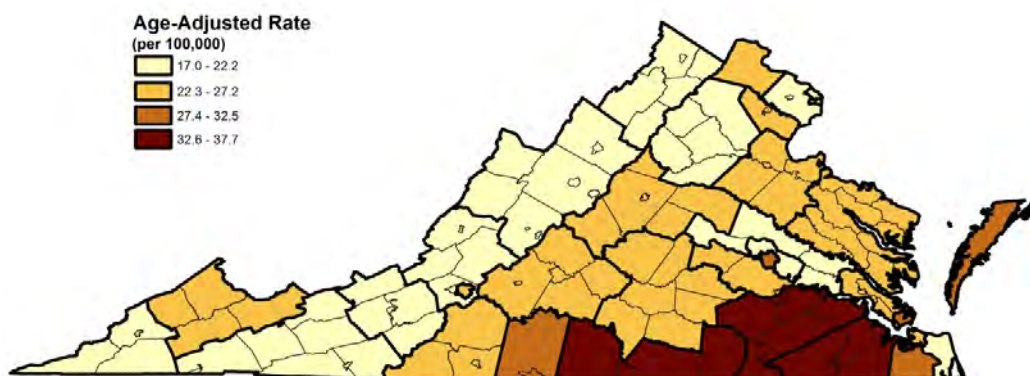
⁴ National Cancer Institute, A Snapshot of Prostate Cancer, <http://www.cancer.gov/researchandfunding/snapshots/prostate> (accessed 11/6/2013).

Map 9.1 Prostate cancer incidence rate by health district, 2006-2010¹



Hampton (226.0 cases per 100,000 men), Chesterfield (202.0), and Richmond (201.9) had the highest incidence rates of prostate cancer among the 35 health districts. Lenowisisco (90.7), Cumberland Plateau (103.2), and Mount Rogers (111.4) had the lowest incidence rates of prostate cancer among the 35 health districts.

Map 9.2 Prostate cancer mortality rate by health district, 2007-2011²



Portsmouth (37.7 deaths per 100,000 men), Crater (35.5), and Southside (35.4) had the highest mortality rates from prostate cancer among the 35 health districts. Henrico (17.0), Fairfax (18.4), and Arlington (19.3) had the lowest mortality rates from prostate cancer among the 35 health districts.

¹ Virginia Cancer Registry. Based on combined 2006-2010 data. Incidence rates are age-adjusted to the 2000 U.S. standard population.

² VDH Division of Health Statistics. Based on combined 2007-2011 data. Mortality rates are age-adjusted to the 2000 U.S. standard population.