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Review Article

The Risk Of Prostate Cancer And The Importance Of Early Screening: What Men Need To Know.

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Abstract

Prostate cancer is a significant public health issue. Globally, greater than 1.5 million new cases of prostate cancer are diagnosed each year. It is the second most common cancer in men worldwide after lung cancer. After lung cancer, prostate cancer is the leading cause of death due to cancer. The most common type of cancer is adenocarcinoma. As in public health, the purpose of this paper is to create awareness on the risk of prostate cancer and the importance of early screening that has proven to save lives. For patients diagnosed with cancer localized to the prostate gland, the 5-year survival rate approaches 100%.

INTRODUCTION

Prostate cancer is a significant public health issue, as it is the second most common cancer in men worldwide after lung cancer (Raychaudhuri, Lin, Montgomery, 2025). Globally, greater than 1.5 million new cases of prostate cancer are diagnosed each year. An estimated 299, 010 new cases of prostate cancer were diagnosed in the United States in 2024 (National Cancer Institute, 2024).

In the United States, it is a non-cutaneous cancer most diagnosed in men (Lin, Carlsson, Filson, et al, 2026). It is estimated that there will be greater than 300,000 new cases of prostate cancer diagnosed in 2026, and greater than 36,000 deaths in the United States (Lin, Carlsson, Filson, 2026).

Men older than age 79 at autopsy had evidence of prostate cancer histologically (Bell et al, 2015; Jahn, Giovannucci, Stampfer, 2015). The most common type of cancer is adenocarcinoma (Humphrey, 2017). Age is the most common risk factor (National Cancer Institute, 2024). Autopsy data reveals a non-linear rise in cancer cases with older age (Bell et al, 2015; Jahn, Giovannucci, Stampfer, 2015). As in public health, the purpose of this paper is to create awareness on the risk of prostate cancer and the importance of early screening that saves lives.

INCIDENCE RATES

There is a large racial disparity in death rates among different racial groups. Black men have the highest rate of death from prostate cancer. The incidence rate for Black men is 173 cases per 100,000 men. The mortality rate is 38.7 per 100,000 Black men. In contrast, the incidence rate is 97.1 cases per 100,000 White men. The mortality rate is 18.0 per 100,000 White men. Prostate cancer in Asian/Pacific Islander men are the lowest in the United States. According to the National Cancer Institute, the incidence rate is 59.3 men per 100, 000 Asian men. The mortality rate is 8.6 to 8.8 per 100,000 Asian and Pacific Islander men (Chung, Horie, Chiong, 2018).

RISK FACTORS

Social determinants of health contribute to risk factors that not only include advanced age, but genetic predisposition. Greater than 50% of prostate cancer involves inherited genetic risk. Other risk factors include ethnicity, obesity, diet, chronic inflammation, hyperglycemia, exposure to chemicals, and ionizing

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radiation (Rawla, 2019). The data disparity is not entirely understood, but may be due to access to health care, life expectancy, modifiable risk factors, frequency of prostate-specific antigen testing and genetic predisposition (Taitt, 2018; Bray et al, 2024).

PROSTATE CANCER SCREENING

Baseline prostate cancer screening may begin at age 40 to 45 years of age for men considered at increased risk, such as Black men, racial and ethical disparities, and a family history of prostate cancer (Siegel, Kratzer, Wagle, et al, 2026). The purpose of screening is to diagnose prostate cancer in asymptomatic men. Two tests that are used in screening for prostate cancer are the digital rectal examination and the prostate specific antigen (PSA) test (Basourakos, Gulati, Vince, et al, 2022). The digital rectal examination for prostate cancer screening is not recommended as a standalone screening test due to diagnostic inaccuracy (Naji, et al, 2018). It is used with the PSA test to determine the risk of clinically significant prostate cancer. The recommended screening test is measuring the serum concentration of prostate specific antigen (PSA). As PSA levels increase with advancing age due to increasing prostate gland volume, age-specific reference ranges have been established. Although PSA testing was developed greater than 25 years ago, it remains controversial in detecting prostate cancer (Vickers et al, 2023). Elevated PSA levels may occur due to benign prostatic hyperplasia, prostatitis, digital rectal examination, and use of certain medications (Nadler, et al, 1995; Schatteman, et al, 2000). This may lead to further diagnostic testing.

Although the diagnostic accuracy rate is approximately 55% (Ahmed, et al, 2017), it is the author's opinion that the benefits of PSA screening are underestimated. In the European Randomized Trial of Screening for Prostate Cancer (ERSPC), the authors demonstrated a 13% decrease in death from prostate cancer over a 30-year follow-up period in a cohort over 150, 000 men (de Koning, 2002). In a study by Schroder and colleagues, PSA screening reduced the rate of death by 20% in a cohort of 162, 243 men between the ages of 55 to 69 years over a median follow-up of 9 years (Schroder et al, 2009). In 2018, the United States Preventive Services Task Force recommended shared decision making between patients and their physician regarding PSA testing for men 55-69 years old (Grossman, et al, 2018). However, allowing patients to make their own decision to complete PSA screening may reduce the benefit of early screening for prostate cancer and survival rates. For patients diagnosed with cancer localized to the prostate gland that has not undergone distant metastasis, the 5-year survival rate approaches 100% (Raychaudhuri, Lin, Montgomery, 2025). Screening for prostate cancer is low in men age 50 and younger. Men considered considerable risk for prostate cancer should begin PSA screening between age 40-45. (Wickes 2026). Men considered standard risk should begin PSA testing between 45-50 years old. For men 50 to 69 years old, the American Urologic Association recommends testing every 2 to 4 years. For men older than 70 years, routine PSA testing is not recommended. For high-risk populations such as Black men, The Prostate Cancer Foundation recommends early PSA testing for men ages 40 to 45 years (Garraway et al, 2024).

CONCLUSION

Prostate cancer is the most common type of cancer in men. After lung cancer, prostate cancer is the leading cause of death due to cancer. Therefore, screening for prostate cancer is important and includes a digital rectal examination and the prostate specific antigen (PSA) test. Early detection of prostate cancer has an extremely high 5-year survival rate approaching 100%.

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