REPORT TO HOUSE AND SENATE ARMED SERVICES COMMITTEES

Senate Report 115-262, Pages 222-223 to Accompany S. 2987, John S. McCain National Defense Authorization Act for Fiscal Year 2019

Prostate Cancer Incidence Among Active Duty Service Members

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EXECUTIVE SUMMARY

This report is in response to Senate Report 115-262, pages 222-223, accompanying S. 2987, the John S. McCain National Defense Authorization Act for fiscal year 2019, that requests the Secretary of Defense submit a report on "Prostate Cancer Incidence Among Active Duty Service Members (ADSMs)" to the Committees on Armed Services of the House and the Senate that: (1) Examines the incidence of prostate cancer by race among ADSMs, including information detailing disparities in the diagnosis and treatment of prostate cancer with a focus on African-American men; and (2) Describes a plan for addressing any disparities and expanding access to diagnosis and treatment options for ADSMs.

In the U.S., prostate cancer is the second most common form of cancer in men.[1] Non-Hispanic black (NHB) men experience the highest prostate cancer incidence, morbidity, and mortality rates and, in the general population, are less likely than non-Hispanic white (NHW) men to receive screening and treatment for the disease.[2] [3] [4] Prostate cancer screening guidelines experienced continuous change over the past three decades. Currently, best practices recommend patients discuss the benefits and risks of screening with their providers.[5]

Studies indicate that prostate cancer is most common in men over the age of 65,[6] which does not reflect the ADSM population, a cohort with greater than 50 percent under the age of 45. The Armed Forces Health Surveillance Branch (AFHSB) conducted an analysis on prostate cancer incidence, risk assessment, screening, evaluation, and treatment in ADSMs from 2005-2017. These findings suggest that racial disparity in prostate cancer incidence among ADSMs is similar to the disparity observed in the general population; however, only a very small fraction of men who develop prostate cancer do so before the age of 50, making these estimates imprecise, potentially biased, and difficult to interpret. In contrast, racial disparities for screening, diagnosis, and treatment are not present among ADSMs.[7] Literature on prostate cancer disparities in the general population suggests there may be genetic factors that increase NHB male susceptibility to prostate cancer; however, access to care barriers that likely contribute to racial disparities in screening, diagnosis, and treatment in the general population may not exist in the Department of Defense (DoD) Military Health System (MHS).[2] [4] [5]

The MHS will continue to monitor and implement prostate cancer screening guidelines of leading medical institutions and explore the latest medical and technological advancements in detection, diagnosis, treatment, and patient care. The U.S. Army Medical Research and Materiel Command (USAMRMC) Prostate Cancer Research Program (PCRP) has 59 ongoing projects focused on prostate cancer health disparities and prioritizes funding for research on the

[1] American Cancer Society. (2019). Key Statistics for Prostate Cancer.
[2] American Cancer Society. (2016). Cancer Facts & Figures for African Americans 2016-2018.
[3] Shenoy D, Packianathan S, Chen A, et al. (2016). Do African-American men need separate prostate cancer screening guidelines? BMC Urol. 16(19).
[4] Chornokur G, Dalton K, Borysova ME, et al. Disparities at presentation, diagnoses, treatment, and survival in African American men, affected by prostate cancer. *Prostate*. 2011; 71: 985-997.
[5] U.S. Preventive Services Task Force. (2018). Final Update Summary: Prostate Cancer: Screening, 2018.
[6] American Cancer Society. (2019). Key Statistics for Prostate Cancer.
[7] Armed Forces Health Surveillance Branch (AFHSB). (2019). Prostate cancer incidence, risk assessment, screening, evaluation, and treatment, 2005-2017.

underlying factors that contribute to racial disparities, including, but not limited to, social, cultural, and biological contributors. MHS epidemiologists and clinicians convene with federal and civilian partners regularly to discuss leading practices in screening, diagnosis, and treatment. These collaborative efforts will continue to move forward to progress understanding of prostate cancer and best practices for screening, diagnosis, and treatment. Moreover, efforts will be made to examine prostate cancer disparities for NHW and NHB men, across the spectrum of ages for which men are at greatest for developing this malignancy.

INTRODUCTION

This report examines the incidence of prostate cancer by race among ADSMs and describes the MHS plan to continue to prioritize research related to prostate cancer disparities and utilize the latest medical and technological advancements in detection, diagnosis, and treatment. In the U.S., prostate cancer is the second most common cancer in men and the second leading cause of cancer death in men, behind lung cancer. The American Cancer Society estimated 174,700 new cases of prostate cancer and 31,600 deaths from prostate cancer in the general population in 2019. Studies indicate that prostate cancer is more likely to develop in older men and African-American men.[8] Within the general population, and among ADSMs, evidence suggests an overall decrease in the incidence rate of new prostate cancer cases per year since the mid-2000s.[9] [10]

BACKGROUND

Within the general population, NHB men experienced the highest prostate cancer incidence, morbidity, and mortality rates in the U.S. from 2008-2012. Within the general population, the incidence among NHB men was nearly twice the incidence among NHW men, and the death rate among NHB men was 2.4 times higher than in NHW men.[11] Additionally, within the general population, NHB men are also less likely to receive the prostate-specific antigen (PSA) screening test,[3] are less likely to receive treatment,[12] and receive fewer treatment options from providers.[13] Literature on prostate cancer disparities cite barriers, such as socioeconomic status and access to care, which are more common for NHB men than NHW men counterparts.[2] [4] [5] Evidence also suggests there may be differences in specific gene expressions that increase susceptibility and

[8] American Cancer Society. (2019). Key Statistics for Prostate Cancer.
[9] U.S. Cancer Statistics Working Group. (2018). U.S. Cancer Statistics Data Visualizations Tool, based on November 2017 submission data (1999-2015). U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute.
[10] Lee T, Williams V, Taubman S, et al. (2016). Incident Diagnoses of Cancers in the Active Component and Cancer-related Deaths in the Active and Reserve Components, U.S. Armed Forces, 2005-2014. Defense Health Agency Medical Surveillance Monthly Report, July 2016. 23(7): 23-31.
[11] American Cancer Society. (2016). Cancer Facts & Figures for African Americans 2016-2018.
[12] Shenoy D, Packianathan S, Chen A, et al. (2016). Do African-American men need separate prostate cancer screening guidelines? BMC Urol. 16(19).
[13] Chornokur G, Dalton K, Borysova ME, et al. Disparities at presentation, diagnoses, treatment, and survival in African American men, affected by prostate cancer. *Prostate*. 2011; 71: 985-997.

aggressiveness of disease among NHB men; as a result, research to better understand these biological factors is ongoing.[4] [5]

Prostate cancer screening guidelines have changed significantly across leading medical research institutions over the past three decades, largely due to research advancements on the limitations of the PSA blood test. A summary of evolving guidelines is presented in Appendix B. Briefly, in the early 1990s, the American Cancer Society recommended annual digital rectal exams and PSA tests for men 40-plus and 50-plus, respectively.[14] In 2008, the U.S. Preventive Services Task Force (USPSTF) concluded evidence on the benefits and risks was insufficient, and in 2012, recommended against PSA-based screening.[15]

A summary of current recommendations is provided in Appendix C. Leading medical institutions, including the USPSTF, recommend that patients discuss the benefits and risks of screening with their providers,[16] but guidelines are inconsistent regarding the circumstances (e.g., age, race, risk level) under which screening should occur. Screening guidelines within the MHS have changed similarly over time as the field of prostate cancer progressed and limitations regarding screening tests have been revealed. In short, the decision to recommend screening occurs at the provider level, and providers within the MHS follow the same best practices, recommendations, and guidelines for screening, diagnosis and treatments as their civilian counterparts.

PROSTATE CANCER INCIDENCE, DIAGNOSIS, AND TREATMENT

The crude incidence rate of new prostate cancer cases per year among the ADSM population is markedly lower than the general population, which is expected, as greater than 50 percent of the ADSM population is under the age of 45. Studies indicate that the average age of prostate cancer diagnosis in men in the general population is 66;[17] for comparison, less than one percent of ADSMs are 65 years and older, and annual incidence of new cases per year among ADSMs 60-plus was 10 or fewer between 2005 and 2017.[18] Consequently, analyses are primarily limited to younger age groups, which are below the cutoff for most recommended screening guidelines.

In 2009, Zhu et al. compared prostate cancer incidence between the military population and general population from 1990 to 2004, using age-adjusted incidence rates to control for the effects of different age distributions between the two populations. The study found that the age-adjusted incidence rates of prostate cancer rates in the military were higher than those in the

[14] The American Cancer Society. (2018). History of ACS Recommendations for the Early Detection of Cancer in People Without Symptoms: Prostate cancer (men).
[15] U.S. Preventive Services Task Force. (2008). Final Update Summary: Prostate Cancer: Screening, 2008.
[16] U.S. Preventive Services Task Force. (2018). Final Update Summary: Prostate Cancer: Screening, 2018.
[17] American Cancer Society IACS). (2019). Key Prostate Cancer Statistics.
[18] Armed Forces Health Surveillance Branch (AFHSB). (2019). Prostate cancer incidence, risk assessment, screening, evaluation, and treatment, 2005-2017.

general population;[19] however, this result may be attributed to increased screening associated with free access to medical care for the military population.[20]

The AFHSB conducted an analysis on prostate cancer incidence, risk assessment, screening, evaluation, and treatment in ADSMs from 2005-2017. For the purposes of this analysis, the report defines cancer health disparities as "adverse differences between certain population groups in cancer measures," such as incidence, prevalence, morbidity, mortality, survivorship, burden of cancer or related health conditions, screening rates, and stage at diagnosis.[21] This classification of "disparity" reflects the current view used in the civilian sector, which is summarized in Appendix D. AFHSB findings support the 2009 study by Zhu et. al., and indicate that among ADSMs, NHB men had more than two-fold greater incidence of prostate cancer diagnosis compared to NHW counterparts; however, NHB men were 1.67 times as likely to receive any screening or risk assessment and were 1.25 times more likely than NHW to receive any treatment.[9] Specific findings include:

- NHB were more than twice as likely to be diagnosed with incident prostate cancer compared to NHW, nearly three times as likely to be diagnosed with genetic susceptibility to prostate cancer, and were nearly two times as likely to have a diagnosis for elevated prostate-specific antigen (PSA) (genetic susceptibility and elevated PSA were assessed regardless of final diagnosis for prostate cancer).

- The rate (per 100,000 person-years) of prostate cancer for both NHB and NHW ADSM was highest for men in the age range of 40 years and above (40-50 < 50-60 < 60+). Within the 40-50 year age range, NHB were three times more likely to be diagnosed with prostate cancer, genetic susceptibility, and personal history of malignant neoplasm. Within this age range, NHB were also twice as likely to be screened for malignant neoplasm and to receive any screening or risk assessment.

- Among ADSMs with a previous incident diagnosis of prostate cancer, a disparity by race/ethnicity in the evaluation and treatment of prostate cancer was not evidenced by the data. Compared to NHW, NHB had similar or higher rates of every type of procedure related to treatment, including prostatectomy, brachytherapy, external beam radiation therapy, and hormonal therapy, and were 1.25 times more likely than NHW to receive any treatment.

Findings suggest that the racial disparity in prostate cancer incidence among ADSMs is similar to those observed in the general population, but disparities in the general population for screening, diagnosis, and treatment do not exist among ADSMs. Only a small fraction of men who develop prostate cancer do so before the age of 50; consequently, due to differences in age distribution, and the small sample size of patients within each group, assessments may be subject to estimates that are imprecise, potentially biased and statistically unstable, and difficult to

[19] Zhu K., et al. Cancer Incidence in the U.S. Military Population: Comparison with Rates from the SEER Program. Cancer Epidemiol Biomarkers Prev. 2009;18(6). June 2009.
[20] Colin SM, et al. Prostate-cancer mortality in the USA and UK in 1975-2004: an ecological study. Lancet Oncol 2008;9:445-52
[21] National Cancer Institute (NCI). (2018). Cancer Disparities.

interpret or to compare with the general population. Additionally, given the time allotted to develop the report, pathologic information is not included in the data; therefore, prostate cancer was defined based on medical records. International Classification of Diseases-coded diagnoses and procedural codes were used to identify outcomes in the analysis; as a result, some data were not available, including information about genetic markers or disease severity.

Findings described above are augmented by studies on racial disparities associated with tumor stage and overall survival. Racial disparities in distribution of tumor stage were found to be not significant in ADSMs.[22] Furthermore, the largest DoD-wide study on prostate cancer, which analyzed overall survival between NHW and NHB beneficiaries diagnosed between 1990 and 2010, evaluated ADSMs, retirees, and dependents, and analyses showed no differences in overall survival for NWH and NWB men below 75 years of age.[23]

In addition, current literature acknowledges that genetic differences between NHB and NHW men are a likely factor in NHB susceptibility and higher incidence, though these differences are not well understood. Lack of access to care, and other socioeconomic barriers that impact NHB men in the general population, may contribute to disparities in screening, diagnosis, treatment, and mortality. [11] [12] Unlike the general population, health care for ADSMs is an equal access to care system that serves a younger population, which may explain the divergence from trends observed in the U.S. general population.

PLAN TO ADDRESS DISPARITIES AND EXPAND ACCESS TO DIAGNOSIS AND TREATMENT OPTIONS

The MHS will continue to utilize the latest medical and technological advancements in prostate cancer detection, diagnosis, treatment, and patient care as a leading health care system in results for NHB men. The USAMRMC PCRP has 59 ongoing projects focused on prostate cancer health disparities, and prioritizes funding for research on the underlying factors that contribute to racial disparities, including, but not limited to, social, cultural, and/or biological contributors. The program will continue to examine disparities for NHB men, across the spectrum of ages for which men are at greatest for developing prostate cancer. The PCRP Strategic Plan includes the goal to "Reduce lethal prostate cancer in African Americans, veterans, and other high-risk populations," and emphasizes research that addresses the biology of lethal prostate cancer and the identification of innovative treatment options.[24] Epidemiologists and clinicians across the MHS convene with federal and external partners regularly to compare research portfolios and discuss leading practices in prostate cancer screening, diagnosis, and treatment.

The MHS will also continue to monitor the prostate cancer screening guidelines of leading medical institutions as guidelines evolve. The decision to screen ADSMs is managed on a case-

[22] Enewold L, et al. (2012). Racial Variation in Tumor Stage at Diagnosis Among Department of Defense Beneficiaries. Cancer 2012;118:1397-403.
[23] Alexander M, Zhu K, Cullen J, et al. (2018). Race and overall survival in men diagnosed with prostate cancer in the Department of Defense Military Health System, 1990-2010. Uniformed Services University of the Health Sciences.
[24] Prostate Cancer Research Program. (2018). Prostate Cancer Research Program Strategic Plan.

by-case basis, as a decision between patient and provider, based on patient risk level as determined by race, age, and family history, among other personal factors.

CONCLUSION

Prostate cancer disparities in incidence of diagnosis among the ADSM population reflect those exhibited in the general population; however, based on AFHSB analysis, there are no disparities related to screening, treatment, and risk assessment among ADSMs. AFHSB evaluation of 2005-2017 prostate cancer data among NHB and NHW ADSMs suggests that while NHB were more likely to be diagnosed with prostate cancer, they were also more likely to receive screening or risk assessment and were 1.25 times more likely to receive any treatment. The MHS will continue to utilize the latest medical and technological advancements in prostate cancer detection, diagnosis, treatment, and patient care as a leading health care system in results for NHB men.

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American Urological Association. (2013). Early Detection of Prostate Cancer.

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Basch E, Oliver T, Vickers A, et al. (2012). Screening for Prostate Cancer with Prostate-Specific Antigen (PSA) Testing PCO. American Society of Clinical Oncology.

Chornokur G, Dalton K, Borysova ME, et al. Disparities at presentation, diagnoses, treatment, and survival in African American men, affected by prostate cancer. *Prostate*. 2011; 71: 985-997.

Lee T, Williams V, Taubman S, et al. (2016). Incident Diagnoses of Cancers in the Active Component and Cancer-related Deaths in the Active and Reserve Components, U.S. Armed Forces, 2005-2014. Defense Health Agency Medical Surveillance Monthly Report, July 2016. 23(7): 23-31.

Mayo Clinic. (2018). Prostate cancer screening: Should you get a PSA test?

National Comprehensive Cancer Network. (2018). NCCN Guidelines for Patients: Prostate Cancer.

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Qaseem A, Barry M, Denberg T, et al. (2013). Screening for Prostate Cancer: A Guidance Statement from the Clinical Guidelines Committee of the American College of Physicians. Annals of Internal Medicine. 158(10): 761-769.

Shenoy D, Packianathan S, Chen A, et al. (2016). Do African-American men need separate prostate cancer screening guidelines? BMC Urol. 16(19).

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U.S. Preventive Services Task Force. (2018). Final Update Summary: Prostate Cancer: Screening, 2018.

APPENDICES

Appendix A: List of Acronyms

AFHSB	Armed Forces Health Surveillance Branch
ADSM	Active Duty Service Member
DoD	Department of Defense
DRE	Digital Rectal Exam
MHS	Military Health System
NHB	Non-Hispanic Black
NHW	Non-Hispanic White
OS	Overall Survival
PCRP	Prostate Cancer Research Program
PSA	Prostate-Specific Antigen
USAMRMC	U.S. Army Medical Research and Materiel Command
USPSTF	U.S. Preventive Services Task Force

Appendix B: Screening Recommendations Timeline

The table below provides a timeline of prostate cancer screening recommendations published by leading medical institutions. The screening recommendations are categorized into three groups: recommend screening ("green"), recommend patient/provider discussion ("yellow", and recommend against screening ("blue").

Organization	1992	2000	2001	2008	2009	2012	2013	2018
American Cancer Society	Recommend Screening		Recommend Screening		Recommend Patient/ Provider Discussion			
US Preventive Services Task Force				Recommend Against Screening		Recommend Against Screening		Recommend Patient/ Provider Discussion
American Society of Clinical Oncology						Recommend Patient/ Provider Discussion		
American Urological Association		Recommend Screening			Recommend Patient/ Provider Discussion		Recommend Patient/ Provider Discussion	Recommend Patient/ Provider Discussion
American College of Physicians							Recommend Patient/ Provider Discussion	
American Academy of Family Physicians								Recommend Against Screening
Mayo Clinic								Recommend Screening
Centers for Disease Control								Recommend Patient/ Provider Discussion
National Comprehensive Cancer Network								Recommend Screening

Appendix C: Current Screening Recommendations

The table below provides the current prostate cancer screening recommendations for leading medical institutions.

Organization	Year	Recommendation
American Cancer Society (ACS)	2010	The ACS recommends that men consult with their providers regarding PSA testing. Men should explore the risks and benefits of the PSA test starting at age 50 if they are at average risk of prostate cancer and have at least a 10-year life expectancy, at age 45 if they are at high risk, and at age 40 if they are at very high risk (those with first-degree relatives who had prostate cancer at an early age).[25]
American Society of Clinical Oncology (ASCO)	2012 (under review)	The ASCO recommends that physicians discuss whether PSA testing for screening is appropriate with men who have a life expectancy greater than 10 years. The ASCO recommends that general screening with total PSA be discouraged in men who have a life expectancy of less than 10 years.[26]
American College of Physicians (ACP)	2013	The ACP recommends that men ages 50 to 69 discuss the benefits and risks of screening with their providers. The ACP recommends that clinicians not screen using the PSA test in average-risk men under age 50, over age 69, or with a life expectancy of less than 10 to 15 years.[27]
U.S. Preventive Services Task Force (USPSTF)	2018	The USPSTF recommends that men ages 55 to 69 discuss the benefits and risks of screening with their providers. The USPSTF recommends against routine screening in men 70 and older.[28]
American Urological Association (AUA)	2018	The AUA recommends that beginning at age 55, men engage in shared decision-making with their providers about whether to undergo PSA screening. The AUA does not recommend routine screening in men between ages 40 to 54 years at average risk, in men age 70+ years, or in men with less than a 10 to 15-year life expectancy.[29]
American Academy of Family Physicians (AAFP)	2018	The AAFP does not recommend routine PSA-based screening for prostate cancer in men ages 55 through 69. The AAFP recommends against screening in men age 70 and older.[30]
Mayo Clinic	2018	The Mayo Clinic recommends offering PSA screening and DRE annually to men ages 50 to 70 with a life expectancy greater than 10 years. Men with risk factors for prostate cancer may need to begin screening earlier.[31]
National Comprehensive Cancer Network (NCCN)	2018	NCCN recommends PSA testing and a DRE for men who are healthy and aware of the tests being used. For some men, testing can start at age 45 and continue until age 75. The recommended age to start screening and how often the tests occur may vary.[32]

[25] The American Cancer Society. (2018). History of ACS Recommendations for the Early Detection of Cancer in People Without Symptoms: Prostate cancer (men).
[26] Basch E, Oliver T, Vickers A, et al. (2012). Screening for Prostate Cancer with Prostate-Specific Antigen (PSA) Testing PCO. American Society of Clinical Oncology.
[27] Qaseem A, Barry M, Denberg T, et al. (2013). Screening for Prostate Cancer: A Guidance Statement from the Clinical Guidelines Committee of the American College of Physicians. Annals of Internal Medicine. 158(10): 761-769.
[28] U.S. Preventive Services Task Force. (2018). Final Update Summary: Prostate Cancer: Screening, 2018.
[29] American Urological Association. (2013). Early Detection of Prostate Cancer.
[30] American Academy of Family Physicians. (2018). Clinical Preventive Service Recommendation: Prostate Cancer.
[31] Mayo Clinic. (2018). Prostate cancer screening: Should you get a PSA test?
[32] National Comprehensive Cancer Network. (2018). NCCN Guidelines for Patients: Prostate Cancer.

Appendix D: Health Disparity Definitions

The table below provides the definition of health disparity by leading medical institutions, government agencies, health plans, and law.

Organization	Definition
Center for Disease Control (CDC)	Health disparities are differences in the incidence, prevalence, and mortality of a disease and the related adverse health conditions that exist among specific population groups. These groups may be characterized by gender, age, race or ethnicity, education, income, social class, disability, geographic location, or sexual orientation.[33]
Health and Human Services (HHS)	HHS defines health disparities as differences in health outcomes that are closely linked with social, economic, and environmental disadvantage and are often driven by the social conditions in which individuals live, learn, work, and play.[34]
Healthy People 2020	A health disparity is a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.[35]
Medline Plus	Health disparities refer to differences in the health status of different groups of people. Some groups of people have higher rates of certain diseases, and more deaths and suffering from them, compared to others.[36]
Minority Health and Health Disparities Research and Education Act	A population is a health disparity population if there is a significant disparity in the overall rate of disease incidence, prevalence, morbidity, mortality, or survival rates in the population as compared to the health status of the general population.[37]
National Cancer Institute (NCI)	Cancer health disparities are adverse differences between certain population groups in cancer measures, such as: incidence (new cases), prevalence (all existing cases), morbidity (cancer-related health complications), mortality (deaths), survivorship and quality of life after cancer treatment, burden of cancer or related health conditions, screening rates, and stage at diagnosis.[38]

[33] Center for Disease Control (CDC). (2018). Basic Information about Health Disparities in Cancer.
[34] Health and Human Services (HHS). (2011). HHS Action Plan to Reduce Racial and Ethnic Health Disparities
[35] Healthy People 2020. (2008). The Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020.
[36] Medline Plus. Health Disparities.
[37] United States Public Law 106-525 (2000), p. 2498
[38] National Cancer Institute (NCI). (2015). About Cancer Health Disparities.

Appendix E: Summary of Existing Evidence

The table below provides a findings summary of evidence regarding incidence, screening, and treatment based on a review of prostate cancer literature published by the Center for Disease Control, Cancer.Org, Cancer.Gov, the U.S. Preventive Services Task Force, and the American Urology Association.

Category	Evidence
Incidence	• There is a higher incidence in African American men compared to Caucasian men. • African American men are considered at 'higher risk' for developing and dying of prostate cancer. • Prostate cancer occurred more frequently in African American Service members compared to Caucasian Service members.
Screening	• The clinical practice recommendation for screening includes a 'shared decision' between patient and physician due to the potential harms of associated with screening. • Men at average risk and an average life expectancy of at least 10 years should receive information about screening for prostate cancer beginning at age 50. • Men at higher risk, including African American men and men with a family history of prostate cancer, should receive information about screening for prostate cancer beginning at age 45. • The most frequently used screening technique is the prostate-specific antigen (PSA) test. • Increasing the PSA threshold used to trigger the decision for biopsy, or need for treatment, reduces the diagnostic and treatment-related harms. • Screening offers a small potential benefit of reducing the chance of death. • Lengthening the interval between screening tests may reduce harms without affecting cancer mortality. • Focusing screening on men at increased risk for mortality may improve the balance of benefits and harms of screening. However, existing studies do not allow conclusions about a greater absolute or relative benefit from screening in these populations.
Treatment	• Active surveillance (closely monitoring the cancer and its growth) through PSA tests and digital rectal exams (DRE), is a common treatment option. • Surgery, radiation therapy, brachytherapy and chemotherapy are common treatment options.