South Carolina Prostate Cancer Study Committee

Final Report

February 2026

The Prostate Cancer Study Committee was established by Proviso 117.169 of the 2025-2026 Appropriations Act. Under the proviso, the Committee was charged with addressing -- at a minimum-- the following:

(1) Determining the best methods to ensure timely screening, accurate diagnosis, and treatment of prostate cancer;
(2) Assessing the need for and viability of a continuum of care for those diagnosed with and in remission from prostate cancer;
(3) Reviewing and evaluating best practices for education and awareness about prostate cancer;
(4) Identifying areas in South Carolina with a high incidence of prostate cancer or poor outcomes (i.e., mortality, survival);
(5) Researching the latest and proven methods for screening, diagnosing, and treating prostate cancer; and
(6) Reviewing current efforts to promote prostate cancer awareness and screening in South Carolina and how best to improve those efforts.

Committee Members

Senator Tom Young, Jr., Chairman
Senator Brian Adams
Representative Mark Smith
Representative J.A. Moore

Ronald W. Gimbel, PhD	Professor of Public Health Sciences, Director, Clemson Rural Health, Clemson University
James R. Hebert, ScD	Health Sciences Distinguished Professor of Epidemiology, Director, Cancer Prevention and Control, Arnold School of Public Health, USC
Edward W. Duffy, Jr., MD	Radiation Oncologist, Prisma Health
Ronald W. Glinski, MD	Chair, Division of Urology, McLeod Health System
Scott Graupner, DO	Hematologist/Oncologist, Lexington Medical Center
David H. Lamb, MD	Urologist, Lexington Medical Center
Samuel Adediran, MD	Oncologist, Spartanburg Regional Health System
Kevin Bennett, PhD	Professor of Family & Preventive Medicine, Director, Center for Rural and Primary Healthcare, USC
Marvella Ford, PhD	Professor & Endowed Chair, Cancer Disparities, Department of Public Health Sciences, MUSC
Asutosh Gor, MD	Hematologist/Oncologist, Carolina Blood & Cancer Care Assoc.
John Lindquist, MD	USC School of Medicine
Ms. Charlene Gentry	Patient Advocate
Ms. Kim Hale	American Cancer Society
Mr. Bud Mann	Hollings Cancer Center Advisory Board, MUSC
Mr. Chris Scott	Patient Advocate
Michelle Stanek, MHS	SC Office of Rural Health

Meeting Dates (per Proviso 117.169, 2025-2026 Appropriations Act and earlier provisos)

November 29, 2023	Gressette Bldg. 308	Statehouse Complex, Columbia, SC
January 8, 2025	Gressette Bldg. 105	Statehouse Complex, Columbia, SC
March 27, 2025	Gressette Bldg. 105	Statehouse Complex, Columbia, SC
September 9, 2025	Gressette Bldg. 105	Statehouse Complex, Columbia, SC
October 21, 2025	Gressette Bldg. 105	Statehouse Complex, Columbia, SC

https://www.scstatehouse.gov/CommitteeInfo/ProstateCancerStudyCommittee/ProstateCancerStudyCommittee.php (Link to SC-PCSC page; includes video archives, all documents)

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1. Executive Summary

Purpose of the South Carolina Prostate Cancer Study Committee

- Evaluate how South Carolina can improve screening, diagnosis, treatment, education, and long-term care for prostate cancer.
- Identify disparities, especially the disproportionate burden on African American men.
- Assess the continuum of care, from early detection through survivorship.
- Review current practices, innovations, and gaps in prostate cancer care statewide.
- Recommend policy, clinical, and community strategies to reduce mortality and improve men's health.

Key findings

Disease burden

- Prostate cancer is one of the most common cancers among South Carolina men.
- The state of South Carolina ranks #32 in prostate cancer incidence but #10 in mortality.
- In South Carolina, African American men experience more than 50% higher incidence and double the mortality of White men.
- The state's mortality-to-incidence ratio is significantly higher than the national average, driven almost entirely by racial disparities.

Screening & diagnosis challenges

- Prostate-specific antigen (PSA) testing and digital rectal exam remain the primary screening tools for prostate cancer but have limitations and are inconsistently applied across clinics.
- Many men lack clear understanding of what PSA values mean; PSA is often misinterpreted as a yes/no cancer test.
- Cost barriers prevent uninsured and underinsured men from accessing screening.
- While initial PSA screening is delivered through primary care, severe urologist shortages, especially in rural counties, create long delays in actual diagnosis and treatment.
- Primary care settings vary widely in risk assessment, repeat PSA testing, and referral pathways.

Innovations in care

- Beyond the PSA, new biomarker tests improve risk stratification (by differentiating high-grade (aggressive) cancer diagnoses from low-grade cancer diagnoses, often reducing unnecessary prostate biopsies.
- Additionally, the use of advanced medical imaging increase accuracy and reduce complications.
- In prostate cancer treatment, focal therapies offer promising options than traditional surgical interventions with fewer side effects.

- Precision medicine-driven approaches and novel systemic therapies are emerging as superior treatment options to conventional treatment of prostate cancer with better outcomes.

Continuum of care & disparities

- In South Carolina, rural and underserved communities lack access to screening, follow-up, and survivorship care.
- Survivorship programs and long-term monitoring are often lacking or inconsistently available.
- Financial burden of treatment costs disproportionately affects younger and lower-income men.
- In some instances, telehealth and mobile health units could help bridge gaps in access to care.

Education & messaging

- South Carolina lacks coordinated, culturally tailored prostate cancer education programming.
- High-risk men, especially African American men, need targeted outreach and awareness efforts, especially in rural communities.
- Women, who often influence men's health decisions, should be included in prostate cancer and men's health screening messaging.
- Community-based strategies in promoting prostate cancer screening and men's health, such as scheduled or impromptu messaging interventions in barbershop and churches, and digital tools have demonstrated promise in closing gaps in awareness.
- South Carolina Department of Motor Vehicles offices represent a statewide, high-traffic opportunity for awareness campaigns.

Strategic opportunities

- Regional men's health transformation projects would test the impact of bundled men's health screenings (such as prostate cancer, cardiovascular risk, diabetes, depression) with counselling and clinical care as warranted.
- Bundled screenings may improve uptake and address multiple morbidity and mortality risk factors simultaneously aimed at improving patient outcomes.
- Utilize federally qualified health centers to educate and screen more high-risk men.

Recommendations

Policy & governance

- Extend the South Carolina Prostate Cancer Study Committee for at least four years to provide oversight and feedback to proposed regional men's health transformation projects.
- Align these efforts with the SC Department of Public Health, funding a dedicated liaison.

Screening access & PSA testing

- Remove or reduce out-of-pocket costs for prostate cancer screening for high-risk men.

- Ensure uninsured and underinsured men are included in regional men's health transformation projects.
- Encourage earlier and regular PSA testing based on clinical and population evidence coordinated with insurance payers.

Clinical workforce & infrastructure

- Address the South Carolina urologist shortage through the following:
    - Expansion of the Rural Provider Incentive Program to include urologists.
    - Tax incentives and loan forgiveness for urologists practicing in rural South Carolina.
    - Grants for capital equipment (e.g., robotic surgery platforms).

Adoption of innovations

- Promote use of novel biomarker tests, advanced imaging, and improved approaches to prostate biopsy to improve accuracy in cancer detection while reducing infection risk.
- Encourage transition from transrectal prostate biopsies to transperineal prostate biopsy to improve cancer detection and reduce infection risk.
- Support adoption of focal therapies and various precision medicine approaches (as warranted by clinical evidence).

Education & public awareness

- Develop statewide education campaigns that include specific approaches and content for high-risk men, women as influencers, and health care providers (various specialties including primary care).
- Leverage multiple organizations to support efforts to include but not limited to the South Carolina Department of Motor Vehicles offices and federally qualified health centers statewide.
- Provide men with clear, plain-language PSA explanations and awareness tools.
- Create and disseminate a standardized PSA-communication framework for use by laboratories, primary care practices, urology clinics, and other organizations.

Men's Health Integration

- Fund regional men's health transformation projects bundling prostate cancer screening with cardiovascular, metabolic, and mental health assessments.

2. Vision Statement

South Carolina has a unique opportunity to become the safest state in America for men at risk of prostate cancer. By combining early detection, equitable access to care, innovative diagnostic tools, science-led treatment and culturally tailored education, the state can dramatically reduce mortality and eliminate longstanding disparities in prostate cancer occurrence. This report outlines a comprehensive strategy to position South Carolina as a national leader in prostate cancer prevention, awareness, and treatment while advancing men's health overall. Our vision is a future in which every man in South Carolina -- regardless of race, income, or geography -- has access to prostate cancer awareness information and timely screening, accurate diagnosis, and high-quality treatment for prostate cancer supported by a coordinated statewide system of care.

3. Introduction

Prostate cancer (PrCA) is the most common cancer in men (after non-melanoma skin cancers).[1] In South Carolina, the American Cancer Society estimates that there were 5,920 new cases and 650 deaths from prostate cancer in 2024.[1] South Carolina ranks #32 (of 50 states) in incidence of prostate cancer occurrence but #10 in deaths meaning that men in South Carolina are much more likely to die from prostate cancer after they develop the disease than men in many other states.[1] (The prevalence, mortality, and impact of prostate cancer in South Carolina is discussed further in Section 2 below.)

Generally, in most men, prostate cancer is a slow-growing disease, meaning it develops gradually over time and usually does not cause serious health problems.[2,3] This might sound reassuring, but there are important concerns.

One major issue is that not all prostate cancers are the same. While most grow slowly and may never cause harm, others are aggressive and can be deadly. Certain factors can make prostate cancer more aggressive. [4,5] Although African American men may not be offered or accept routine screening, they tend to have higher rates of more aggressive variants of prostate cancer. Additionally, men who are diagnosed at a younger age (and African American men are diagnosed, on average, seven years earlier than European American men) often face a more dangerous version of the disease, leading to more years of lost life. [6,7] This means that for some men, prostate cancer can be life-threatening, requiring early and effective treatment.

On the other hand, aggressive treatment of a slow growing prostate cancer that has little chance of harm can lead to serious problems.[8] Many treatments for prostate cancer, such as surgery and radiation, come with potentially serious side effects. [4] Two of the most common side effects are impotence (trouble with sexual function) and urinary incontinence (difficulty controlling urination). These issues can significantly impact a man's quality of life. Therefore, men and their family and doctors must carefully decide when treatment is truly needed and when it might do more harm than good.

One of the greatest challenges in managing prostate cancer is finding the right balance. If treated too aggressively, we may cause unnecessary pain and suffering. If not treated enough, aggressive cancer could spread and become deadly. Doctors and researchers are working hard to find better ways to identify which prostate cancers are dangerous and which ones can be safely monitored without immediate treatment. [4,5,8]

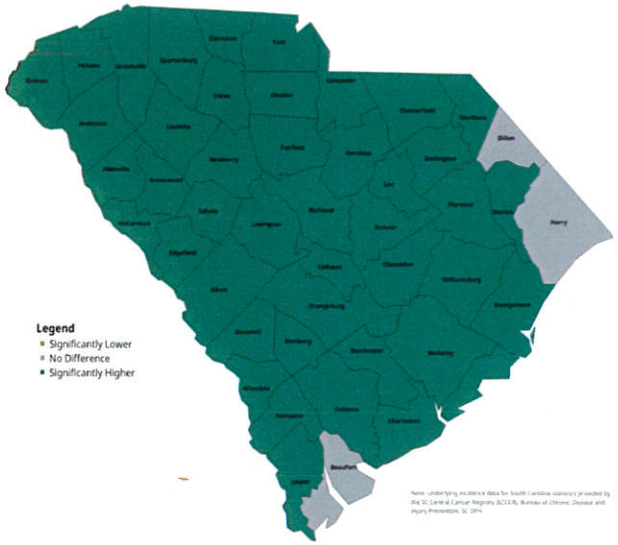
It also is important to understand that prostate cancer does not exist in isolation, it is part of a bigger picture of men's health. Studies show that men, on average, live five fewer years than women. This is due to a variety of health factors, including heart disease, high blood pressure, diabetes, and lifestyle choices that also may increase the risk of prostate cancer. Because of this, any program aimed at addressing prostate cancer should also take a broader look at men's health in general. For example, regular check-ups, a healthy diet, exercise, other routine cancer screening (colon cancer as an example) and not smoking are all key factors in maintaining overall health. These habits can improve quality of life and help prevent many other diseases that can also lower the risk of prostate cancer. A comprehensive approach to men's health means that we do not just focus only on prostate cancer but instead encourage overall well-being.

As we work to improve prostate cancer detection and treatment, it is important to remember that each patient is different. The key is to make informed decisions that consider the risks and benefits of treatment. By focusing on overall health and well-being, we can not only improve outcomes for prostate cancer but also help men live longer, healthier lives.

South Carolina must take a leadership role in prostate cancer prevention because the state faces one of the highest mortality burdens in the nation. Although incidence is moderate, men in South Carolina are significantly more likely to die once diagnosed, and African American men bear a disproportionate share of this burden. The economic and social costs of late-stage cancer—including lost productivity, financial strain, and premature mortality—are substantial. By acting now, South Carolina can reverse these trends, reduce avoidable deaths, and establish a model for other states seeking to address prostate cancer disparities.

4. Incidence, Prevalence, Mortality, and Impact of Prostate Cancer in South Carolina

South Carolina Prostate Cancer Comparison of the Age-Adjusted, County-Specific Incidence Rate for Black Men vs. the Age-Adjusted State-Specific Incidence Rate for White Men (2018-2022)

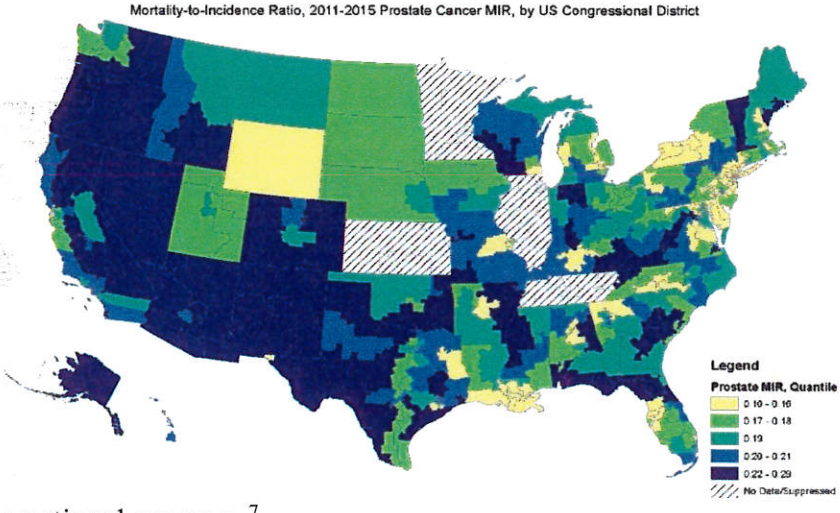


Owing to its high incidence and overall relatively low mortality – more on the mortality-to-incidence ratio [MIR] later – prostate cancer is one of the most prevalent cancers among men in South Carolina, reflecting national trends in its incidence, which is high (especially at older ages when it is generally a very slow-growing cancer) and mortality, which tends to be low, especially among older men. Despite relatively low incidence, As shown in this figure PrCA incidence rates are significantly higher in Blacks than Whites in 42 of South Carolina's 46 counties. This is remarkable in that the average county has about 100,000 residents and we rarely see significant differences between entire states, which contain tens millions of individuals!

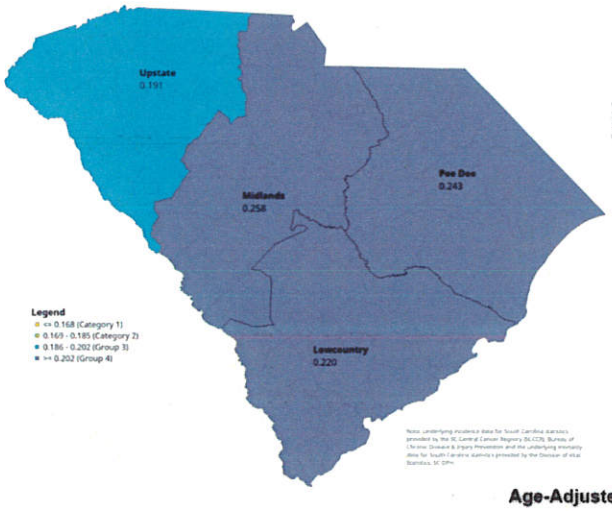
PrCA is a significant public health concern, in large part because African American men experience higher rates of diagnosis and mortality compared to other racial groups [more than 50% higher incidence and over twice the death rate]. [7,9,10]

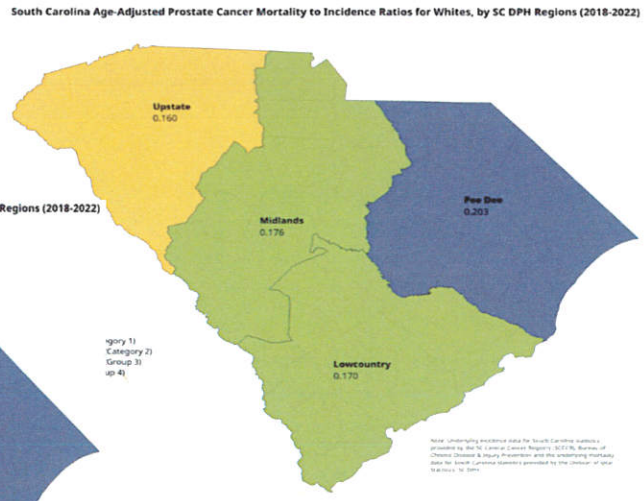
According to data from the South Carolina Department of Public Health (DPH) and the American Cancer Society, PrCA ranks among the leading cancer diagnoses in the state. Mortality rates from prostate cancer in South Carolina are among the highest in the United States, with African American men facing a disproportionately higher risk of dying from the disease [about 30% higher than the national average]. The ratio between mortality and incidence (MIR) provides an excellent way to assess the deadliness of individual cancers. As this figure from our publication on MIRs for PrCA in US Congressional districts shows ➡, South Carolina has a much higher MIR than the country as a whole. Indeed, almost every part of the state has an MIR >0.17, which is the national average. [7]

Mortality-to-Incidence Ratio, 2011-2015 Prostate Cancer MIR, by US Congressional District



It is clear that the PrCA MIR for the state as a whole is high. What that obscures is the fact that nearly all of the excess mortality is driven by what we see in the figures below ⬇ showing MIRs in the state's four DPH Regions in Blacks (left panel) versus Whites (right panel), whose MIR is about the US average for Whites (left panel):





It must be stressed that these results, also shown in this table below, ⬇ show mortality differences after accounting for incidence – overall PrCA mortality is >2.5 times higher in Blacks.

Age-Adjusted Prostate Cancer Mortality to Incidence Ratios by Race and Region in South Carolina (2018-2002)

Region	Black MIR	White MIR	Absolute Difference	MIR Rate Ratio (Black/White)
Upstate	0.191	0.160	0.031	1.19
Midlands	0.258	0.176	0.082	1.47
Pee Dee	0.243	0.203	0.040	1.20
Lowcountry	0.220	0.170	0.050	1.29

Socioeconomic factors, limited access to healthcare, and lower screening rates contribute to these disparities. Early detection through PSA testing and digital rectal exams (DRE) has been shown to improve survival rates, yet disparities persist in access to these critical screenings and, as we discussed earlier, aggressive screening can lead to over detection and inappropriately aggressive treatment of slow-growing prostate cancers. This problem is confounded by the fact that a single PSA measure is a much poorer screening test (especially for aggressive prostate cancers) compared to regular PSA screening over time. Therefore, the PSA has to be used in consecutive tests over sufficiently long periods of time (i.e., several years).[11,12]

The impact of prostate cancer extends beyond mortality statistics, affecting the quality of life of patients and that of their families. Many men diagnosed with prostate cancer experience significant physical and emotional challenges, including urinary incontinence, erectile dysfunction, side effects of systemic therapies such as androgen deprivation therapy (ADT)/chemotherapy and psychological distress. The economic burden and "financial toxicity" are also substantial, as treatment costs, lost productivity, side-effect management, and long-term care expenses combine to place financial strain on patients and their families. The burden falls most heavily on young men and the poor.

Efforts to reduce the prevalence and mortality of prostate cancer in South Carolina include increasing prostate cancer awareness, promoting early screening, and addressing healthcare disparities. Health-related organizations and healthcare providers continue to advocate for targeted interventions, particularly for high-risk populations through targeting established risk factors can

only get us part way towards a solution. Through community engagement, education, and policy changes, South Carolina aims to improve prostate cancer outcomes and reduce the disparities that persist among its residents.

5. Current methods in screening, accurate diagnosis, and treatment of Prostate Cancer in South Carolina

Prostate cancer screening in South Carolina follows national guidelines, primarily using PSA testing and digital rectal exams (DRE). These methods help detect potential prostate cancer cases early, increasing the likelihood of successful treatment. However, using these methods alone is ineffective because there are many false positives and false negatives. Accordingly, attention needs to focus on detecting aggressive prostate cancer, not just any prostate cancer. The American Cancer Society and the U.S. Preventive Services Task Force recommend shared decision-making between patients and healthcare providers, particularly for men aged 55 to 69 years, while emphasizing early screening for high-risk groups, including African American men and those men with a family history of the disease. Family history means a father, grandfather, or brother with prior history of PrCA**).** As PSA screening is a de facto gateway toward detection of potential prostate cancer, cost or cost-sharing mandates for PSA screening represents a barrier to uninsured and economically disadvantaged men. Addressing this barrier, nine states currently guarantee coverage of prostate cancer screening without copays or other cost-sharing.

It is important to understand PSA values and what they mean. For example, a PSA value such as "0.01 ng/mL (normal 0.00–4.00)" needs clearer context so that men understand what the number actually means. PSA is only one piece of a larger decision-making process and is not a yes/no test for prostate cancer. As the National Cancer Institute explains, both prostate cancer and benign conditions—including benign prostatic hyperplasia (BPH) and prostatitis—can raise PSA levels, which means that a high PSA does not automatically indicate cancer.[13] Likewise, a low PSA makes significant prostate cancer less likely, but it does not guarantee zero risk, because some men with prostate cancer can still have PSA values within the expected range.[14] The Mayo Clinic also emphasizes that PSA levels can rise for noncancerous reasons such as inflammation or enlargement, and that the test "doesn't provide precise diagnostic information" on its own.[14] Providing this context helps prevent both complacency when PSA is low and unnecessary panic when PSA is elevated, encouraging men to discuss results with a clinician rather than drawing conclusions from the number alone.

To improve clarity and reduce confusion among patients, South Carolina would likely benefit from a standardized PSA-communication framework for laboratories, primary care practices, and urology clinics. This framework could include a plain-language explanation of what PSA measures, how values should be interpreted over time, and why PSA is not a definitive cancer test. Standardizing communication will help men make informed decisions and reduce both unnecessary anxiety and false reassurance.

Driven in part by a history of controversial and conflicting guidance on the effectiveness of the PSA as a screening tool for PrCA, screening in South Carolina and other states is not consistently applied across primary care settings. While nearly all primary care clinics, federally qualified health centers (FQHCs), rural health clinics (RHCs), and urgent care clinics offer PSA screening, the process on what is done varies with respect to risk thresholds, collecting and assessing family history data, ordering repeat PSA testing, and referral to urology for additional testing and potential diagnosis of PrCA. Like many other states, South Carolina has a significant shortage and unequal distribution of urologists especially in rural counties within the state. According to the American Urological Association (AUA), the challenge is national with 60 percent of counties not having a urologist with significant declines in per capita representation the norm. The average age of

urologists nationally is 55 years and nearly 30% are 65 years or older.[15] Urology staffing is important to enhanced PrCA screening as primary care clinicians must have an accessible specialist to refer patients to. A 2022 study by the American Urologic Association found that "patients in rural areas wait an average of 10 weeks longer for diagnostic and therapeutic procedures compared with urban patients."[16] Such delays in care often lead to adverse health consequences for patients including those related to prostate cancer.

Addressing South Carolina's urology workforce shortage requires a multi-year, multi-strategy approach. The state should expand rural provider incentive programs to include urologists, offer loan repayment and tax incentives for specialists who practice in underserved counties, and support tele-urology programs to extend specialist reach. Establishing rural urology residency rotations and fellowships can help attract new clinicians to the state. A statewide urology workforce dashboard should be developed to track provider distribution, identify gaps, and guide resource allocation. Strengthening the workforce is essential to ensuring timely diagnosis and treatment for men across South Carolina.

Accurate diagnosis of prostate cancer in South Carolina involves multiple approaches. If PSA levels are elevated, follow-up procedures such as repeat PSA tests, magnetic resonance imaging (MRI) / prostate-specific membrane antigen positron emission tomography (PSMA PET)/ computed tomography (CT) imaging and prostate biopsies can be used to assess whether a cancer is present. Advances in multiparametric MRI (mpMRI) and biomarker tests improve diagnostic accuracy, reducing unnecessary biopsies and overtreatment. Additionally, genomic testing is increasingly used to assess cancer aggressiveness[17], helping to guide personalized treatment plans.

To support prevention, men should discuss PSA testing with their doctor, basing screening decisions on variables such as age, race, and family history. Many guidelines recommend beginning PSA testing in average risk men at age 55[18]; Medicare begins covering costs for men at age 50. Some guidelines recommend PSA screening between ages 40-54 for higher risk men which is defined as any of the following risk factors: (1) a first degree relative (father or brother) with prostate cancer; (2) two or more extended family members with prostate cancer; (3) being African American due to higher risk of aggressive disease.[18] Similarly, the American Cancer Society provides nearly identical guidance recommending that PSA screening begin at age 45 for high risk men (African American men or those with a first degree relative diagnosed before age 65) and at age 40 for men with more than one first-degree relative diagnosed younger than age 65.[19] For men over age 70, the Center for Disease Control does not recommend routine screening.[20]

As elsewhere in the United States, treatment options for prostate cancer in South Carolina vary based on cancer stage, patient health, health insurance coverage rules, and personal preferences. Active surveillance is recommended for low-risk cases, avoiding immediate intervention while closely monitoring disease progression. For localized prostate cancer, treatment options include surgery (robotic-assisted radical prostatectomy, radical retropubic prostatectomy), radiation therapy (external beam or brachytherapy), and emerging focal therapies such as high-intensity focused ultrasound (HIFU) and cryoablation. For advanced or metastatic cases, androgen deprivation therapy (ADT), chemotherapy, immunotherapy, and novel targeted therapies are used. Clinical trials and precision medicine approaches continue to evolve, offering new hope for patients. In the next section, we will discuss innovations that could lead to better clinical options and improved quality of life.

Managed care initiatives, such as pharmacy benefit managers (PBMs) employed by managed care organizations, health systems, self-insured employers, and others play key roles in utilization management, formulary management, and disease management. Despite potential benefits, the SC-PCSC received testimony of some adverse impacts of controlling distribution of patient-specific drugs used in cancer treatment. In PrCA, there are reported treatment delays, disruption in continuity of care, and limitations on physician ability to deliver the right drug at the right time. For PrCA patients in particular—who often rely on time-sensitive injections, infusions, and hormone therapies—protections should be made to help avoid treatment delays, maintain continuity of care, and ensure that physicians can administer the right drug at the right time. Such measures can safeguard patient access, reduce avoidable interruptions in therapy, and support better prostate cancer outcomes.

Because "business-as-usual" has not materially improved prostate cancer outcomes for a long time, efforts in South Carolina should focus on increasing access to advanced diagnostic tools and treatments, addressing healthcare disparities, and promoting early detection of aggressive cancers. By enhancing screening, diagnosis, and treatment strategies, we aim to improve prostate cancer outcomes and reduce mortality rates, particularly among vulnerable populations. We have designed this program with improved quality of life and reduced disability in mind. [21]

6. Innovations in screening, diagnosing, and treatment of Prostate Pancer: What's approved and forthcoming on the horizon

Innovation in prostate cancer screening using novel biomarkers:

The PSA test lacks sensitivity (ability to detect people who really have PrCA), which results in inconclusive findings. This leads to overuse of biopsies. Biopsies are invasive, carry risk of mortality due to sepsis and are costly.[22] Current research is focused on how to better detect PrCA in individuals using novel biomarkers and technology either in conjunction with the PSA test or by replacing it all together.

Confirmatory studies, particularly in Europe, have demonstrated significant reduction in mortality with PSA-based screening[23-25] efforts but with a cost (unnecessary invasive biopsies and frequent overdiagnosis of low-grade, slow-growing indolent cancers).[23] In response, current clinical guidelines suggest that men with elevated PSA level undergo multiparametric magnetic resonance imaging (mpMRI), if available, or biomarker testing for risk stratification prior to biopsy.[23,26,27] There are at least three novel biomarkers tests, identified below, that are approved for clinical use for the probability of high-grade, aggressive cancer and could be deployed, secondary to the PSA to validate the need for, and guide shared decision making of an initial prostate biopsy.

The **ExosomeDx™ Prostate IntelliScore (EPI) test** is an example of a screening tool used with an inconclusive PSA test. EPI test is a urine exosome gene expression assay. EPI is a noninvasive and reasonably affordable secondary PrCA screening that can prevent unwarranted biopsies and DREs.[28] The test has a singular purpose of guiding decision whether or not to biopsy the prostate based on patient risk of acquiring high-grade cancer. The test does not predict probability of low-grade cancer but does determine probability of acquiring high-grade cancer (Gleason score ≥ 7) with 92% sensitivity and high negative predictive value (NPV).[28,29] The EPI urine biomarker outperformed multivariate risk calculators in a homogeneous risk group of pre-biopsy men[29,30] as well as those men facing re-biopsy decisions[31]. To date, over 70,000 men have completed the test. The test is covered by Medicare, Veterans Affairs, and many private payors and granted breakthrough discovery approval by the Food and Drug Administration. The test is offered as an at-home kit mailed to the patient. The patient follows instructions to collect his own sample and ships with the required packaging to the laboratory.

The **MyProstateScore 2.0 (MPS2) test** is a valid 18-gene urine test for high-grade prostate cancer for men with elevated PSA.[23,32] The test has demonstrated 95% sensitivity for aggressive PrCA; i.e., with a **Gleason score ≥7 or Grade Group ≥2 with high NPV and 99% sensitivity with high NPV for GG3 and above.**[23] The MSP2+ is a variant that adds a prostate volume measurement. In a clinical validation of the MSP2 demonstrated that the test would have safely avoided additional testing in 35% to 51% of the 761 men included in its validation study.[23] The test was approved for use by the Food and Drug Administration (FDA) and in November 2024, the MPS2 prostate test was approved by Medicare. The MPS2 test is offered as an at-home kit mailed to the patient. The patient follows instructions to collect his own sample, ships with the required package (with ice pack) to the laboratory for next day arrival; expected results are available in 5-7 days.

The **4Kscore® Test** is an innovative assay that screens four biomarkers in the blood following an inconclusive PSA test. Results from the assay are calculated and are intended to be read with the patient's medical history/risk, clinical examinations and/or other findings.[33] This approach guides the urologist and the patient in determining the probability of high-grade prostate cancer and follow-up action. In systematic reviews and meta analyses in Europe and the US, the 4Kscore® test was highly consistent across 11 validation studies involving over 10,000 men.[34] The 4Kscore® Test is FDA approved and Medicare and other payors "may" fund when certain conditions are met.

Summary: There are numerous novel biomarker tests to assist in guiding shared decision making between patients and urologists on steps to take when PSA readings exceed desired thresholds. A review of commercially available testing in 2020 compared nine tests, some for biopsy-naïve men and others aimed at re-biopsy decisions.[35] Commercially available tests have supporting validation manuscripts and federal approval to market. Head-to-head comparison of the various biomarker tests, used as standalone tests[36] or in conjunction with medical imaging[35-37] are demonstrating favorable results in understanding probability of high-grade cancer, reducing unnecessary biopsies, and over detection and treatment of high- risk prostate cancer.[35-37] While favored biomarkers are emerging in the literature, additional head-to-head validation studies for optimal use are warranted.[35]

Innovation in prostate biopsy techniques

The transrectal ultrasound (TRUS) biopsy was first introduced in 1989 (though conceptualized in 1937) and has become a mainstay of urological practice.[38]The TRUS biopsy technique has undergone improvements in the last three decades of practice. An alternative approach, the transperineal (TP) biopsy actually preceded the transrectal (TR) biopsy with the first performed in 1922. A guided TP prostate biopsy with ultrasound guidance was operationalized around 1985.[38] Using a TP approach, biopsy devices/needles enter the prostate through soft tissue located between the scrotum and rectum, bypassing the rectal environment and its bacteria. The TRUS prostate biopsy has been criticized globally for passing instruments through the rectal (dirty) environment to the clean environment which violates fundamental surgical principles of sterile technique.[39] To combat sepsis from the TRUS prostate biopsy, clinicians have prescribed a variety of prophylactic antibiotics, but the use of some of these (e.g., fluoroquinolone) have been controversial due to a strong association with changing antimicrobial resistance.[39,40] Key challenges of the TRUS prostate biopsy are its being blind to the location of the of clinically significant cancer within the prostate and the complication rate from infection/sepsis.[41] To that point, the accuracy of the TRUS prostate biopsy on the detection and staging of clinically significant PrCA has been reported to be poor; substantial variation reported across studies (e.g., 27% to 40%[42], 48%[43], 63%[44]). Infection complications can occur from a TRUS prostate biopsy and be problematic and expensive for patients who acquire them. For example, urinary tract infection has been reported in > 6% of men undergoing the procedure and sepsis[45] in ~ 1% of cases which can lead to up to 6% emergency room visits and 4% hospitalizations.[40] The presence of chronic disease (e.g., diabetes, metabolic syndrome) and benign prostatic hyperplasia have been associated with heightened odds of complications.[40]

The challenges of improving techniques in detecting clinically significant PrCA and exploring how to reduce complications in the prostate biopsy process have captured the attention of clinicians, bioengineers, medical imaging companies, and other experts. In addressing how to

improve clinically significant PrCA detection, there has been developments in the use of ultrasound, multiparametric magnetic resonance (mpMRI) imaging[43,44,46], and the fusion of both technologies[42,47] aimed at improved accuracy in both TR and TP approaches. Some of these technologies are clinician-led while others include artificial intelligence-assisted guidance.[48] While any transformational shift in clinical approaches to prostate biopsies has yet to be realized in urology practice, operating procedures on the incorporation of mpMRI use in the diagnosis, staging and management of prostate cancer is one example of a step forward in recognizing its contribution.[49]

Head-to-head comparison of technology-enhanced approaches to enable prostate cancer biopsy are being explored and published. Examples include studies suggesting the superiority of MRI targeted prostate biopsy approaches as compared to traditional TRUS prostate biopsy approaches, or combined approaches, particularly on the detection of clinically significant cancer.[41,42,44,46]

To improve detection of clinically significant PrCA and reduce complications common with TRUS prostate biopsies, there is substantial development and testing of optimization strategies for the use of the TP biopsy approach. A recent (2024) health technology assessment, which included 19 comparative studies, of the TR and TP approaches found: 1) no statistical difference in PrCA detection rates for TP biopsies compared to TR biopsies with local anesthetics, 2) the same held true for TP biopsies with freehand devices compared to TRUS biopsies, 3) economic analysis indicted that TP biopsies are cost-effective compared with TRUS biopsies conducted using local anesthetics, 4) TR biopsies had higher infection rate than TP, and 5) TP was associated with urinary retention complications.[50] In a head-to-head comparison of TR and TP biopsy of 2048 prostate biopsies over an 11-year period of time found that: 1) TR biopsies resulted in more infectious complications and hospital admissions than TP biopsy for similar rates of re-presentation and urinary retention[51], 2) TP biopsy costs reduced over time and use with mpMRI provided an overall cost savings, and 3) TP biopsy is safe and feasible.[51]

True "innovation" has been realized with the introduction of mpMRI and MRI/ultrasound fusion of technologies to both TP and TR prostate biopsy approaches. An innovation named the transperineal magnetic resonance-ultrasound fusion guided biopsy (MFGB) is an increasingly popular technique that can be performed in ambulatory settings under local anesthesia by a single urologist. In 1,097 men undergoing this procedure at a single center, there was an observed complication rate of 0.73% (8/1097)[52] with only one hospitalization. Pain from local anesthesia was reported by patients to be tolerable, with median pain scores of 2 (out of 10) for local anesthesia procedure and 1 for the biopsy. Of the 1097 patients, 723 (66%)[52] had detectable PrCA with GC ≥ 2. Prophylactic antibiotics were not prescribed for the MFGB procedure and infection rate was low.

Summary: Innovation in prostate biopsies has been focused primarily on two key questions: 1) how do we improve the detection of high-grade cancer from the biopsy? and 2) how to minimize complications, especially infectious complications such as sepsis. Accordingly, effort has been focused on integrating MRI and a fusion of ultrasound and MRI to better guide the operator (predominantly urologists) in sampling where core samples are extracted for both TR and TP approaches. Efforts to enhance the TP approach, with minimal complications, local anesthesia, ambulatory setting, accurate detection of high-grade PrCA and cost effectiveness may soon shift

the biopsy approach to enhanced TP away from the traditional gold standard TR that has been problematic for reasons discussed above.

Innovation in treatment of prostate cancer

Focal therapy in localized prostate cancer

Focal therapy is a minimally invasive strategy to selectively treat localized prostate cancer[53]. For localized prostate cancer, active surveillance or surgery and radiotherapy are considered standard treatment options.[53-55] Focal therapy has the benefit of reducing the likelihood of incontinence and impotency compared to radical treatment.[53] There have been at least 124 published studies on focal therapy over the past five years; many demonstrating functional outcomes and minimal adverse events.[53,56] However, definitive proof of oncological effectiveness against standard of care is pending, due in large part to the heterogeneity of data reported.[56] Focal therapy techniques are guided by ultrasound imaging, some MRI imaging, and some a melding of both ultrasound and MRI technologies aimed at improving precision. Variations in the ablation techniques include focal laser ablation,[53,57,58] cryoablation,[59] photodynamic therapy,[60] focal brachytherapy,[61] and radiofrequency ablation[62] outlined in Table 1 below. Partial gland ablation (PGA) approaches in prostate treatment include both thermal and nonthermal therapies[57]. Most of these PGAs for localized PrCA are well tolerated with significantly fewer side effects, particularly erectile function and urinary incontinence, than whole gland ablation treatment[57]; varies by approach.

Table 1: Comparison of focal therapy approaches to treating PrCA

Name	Energy source	With imaging	TR or TP approach	Complications	Treatment failure rate	Radiation exposure	Anesthesia
High-intensity focused ultrasound (HIFU)[63,64]	thermal energy from sonic waves	US, MRI fusion	TR only	incontinence-low; ED-moderate to low	20-30%	no	local (epidural) or general
Focal cryotherapy (FC)[63]	cryotherapy (cold gas)	MRI, US	TR or TP	incontinence-low; ED-moderate to low	20-30%	no	local
Focal laser ablation (FLA)	laser (heat)	MRI, MRI fusion	TR or TP	incontinence-low; ED-low	25-35%	no	local
Transurethral ultrasound ablation (TULSA)[65]	thermal energy (heat)	MRI	Neither – through penis	incontinence-low; ED-higher	12-20%	no	general
Irreversible electroporation (IRE)[63]	Short pulses direct electricity	US, MRI	TP	incontinence-low; ED-moderate to low	3-10%	no	general
Photodynamic therapy (PDT)[60]	Oxygen and infrared light	MRI, optical imaging	TP	incontinence-low; ED-higher	35%	no	general
Focal brachytherapy	Radiation seeds (high or low dose)	MRI	TP	incontinence-low; ED-higher	10-20%	yes	general
Radiofrequency ablation[66]	Electrical energy and heat	MRI, TRUS, fusion	TP	incontinence-low; ED-higher	20-25%	no	local and sedative

Note: Most of the information included from Table 1 was derived from three reviews/systematic reviews of the literature.[53,57,67] Additional references for individual techniques are referenced in the left column.

Summary: Table 1, above, identifies eight types of focal therapies being performed in the U.S. and across the globe (especially in Europe). Most of the 124 manuscripts demonstrate favorable outcomes for focal therapy and the potential for transforming PrCA treatment from the current standard of care. Not all of the focal therapies identified above are available in South Carolina and most are not yet covered by health insurance. Additionally, many of the research studies include a small number of cases and data are not uniformly collected across studies which makes direct comparison difficult. It is important to standardize methods to prove oncological effectiveness which will, in turn, influence professional society clinical guidelines and policies. These, in turn, fuel broad adoption by clinicians. Focal therapies may be widely accepted first in Europe before the United States. In 2021, Germany published what they cite as the first evidence-based guidelines on focal therapy in localized prostate cancer.[68] They include 14 recommendations (10 are expert consensus) on focal therapy that cover topics such as general recommendations, diagnostics and therapy.[68] Within the United States, some of the focal therapy approaches are offered commercially in privately operated Prostate Centers and specialty practices designed to deliver them; those practices are located in locations with large populations of older men (e.g., Florida, California) who often pay out-of-pocket for care and in states (e.g., Minnesota, New York, North Carolina, Pennsylvania, California) with large cancer centers/academic medical centers supporting active clinical research/clinical trials. With respect to focal therapies, the academic centers tend to offer IRE, HIFU, and cryotherapy procedures that have a longer history than contemporary novel approaches.

Non-surgical approaches to localized and metastatic prostate cancer:

While detailed information on innovation in non-surgical approaches to localized and metastatic prostate cancer is beyond the scope of this report, a high-level summary is included below.

Active surveillance for low-risk prostate cancer:

Prior to about the 2010's, most men diagnosed with prostate cancer that has a low risk of causing death had immediate treatment with surgery or radiation.[69] The utilization of active surveillance among men in this category has grown dramatically from about 26.5% (2014) up to 59.6% (2021)[69,70]. With active surveillance, many begin after PSA tests and biopsy. Genetic and molecular testing is beginning to present in active surveillance protocols[69] to help guide decision making. In a 2020 study led by Dr. Cooperberg and colleagues, the investigators suggested that active surveillance intensity can be modulated based on an individual's risk parameters and that many men may be safely monitored with a substantially less intensive surveillance regimen[71].

Hormone therapy for advanced or metastatic prostate cancer:

Over the past decade, new approaches to hormone therapy for advanced or metastatic prostate cancer have been approved and are in use.[72] This type of therapy involves decreasing testosterone production or blocking the effect of testosterone. Testosterone is the main fueling source for the majority of men with a new prostate cancer diagnosis. Many standard hormone therapy treatments involve subcutaneous injections while newer therapies include oral pills with the same effect. Many prostate cancers that originally responded to treatment with a standard hormone therapy or surgical castration (orchiectomy or removal of the testicles which produce testosterone) can become resistant over time, resulting in castrate-resistant prostate cancer (CRPC).[72] Drugs are also used in some patients where standard hormone therapies are still responding to prostate cancer but has spread elsewhere in the body.[72]

Treatment options for biochemically recurrent prostate cancer

In patients who have increases in PSA after definite upfront treatment (surgery or radiation) a number of factors determine management decisions. Life expectancy certainly needs to be considered. For patients with life expectancy <5 years observation is generally preferred rather than upfront therapies. For most men though imaging is recommended and if the patient is found to have disease that has metastasized then a combination of hormone therapy and medical therapies with either oral targeted treatments or IV chemotherapy are used for treatment. For men who have no evidence of distant spread of cancer then there are several options that can be discussed with the patient and guided by a multidisciplinary medical team approach. In patients who had upfront surgery and in combination with radiation and hormone therapy may be used. In patients who had upfront radiation and are found to have only disease localized to the prostate then different local surgical procedures with a Urologist may be performed usually in combination with hormone treatment.

Antiandrogen therapies and Abiraterone

Anti-androgen therapies which are oral drugs that block or modify testosterone and other sex hormone receptors and production of these hormones that fuel prostate cancer growth have become widely used in the treatment of metastatic prostate as well as very high-risk prostate cancer without metastasis. Anti-androgen therapies in prostate cancer include bicalutamide (Casodex) as well as more potent newer generation anti-androgen therapies enzalutamide (Xtandi),[73,74] darolutamide (Nubeqa),[75] and apalutamide (Erleada).[76,77] Abiraterone (Zytiga)[77,78] is a newer targeted oral agent blocking that biochemical pathway leading to sex hormone production (which fuels prostate cancer growth) and is used in combination with an oral steroid.

Intravenous (IV) chemotherapies

Docetaxel (Taxotere)[79] is a standard IV chemotherapy treatment for metastatic prostate cancer which increases survival in patients with advanced prostate cancer and can work faster when this is needed to control prostate cancer growth. Docetaxel remains the standard frontline therapy for metastatic prostate cancer in patients with a more advanced metastatic presentation. Chemotherapy kills fast growing cells in the body and is potent in treating aggressive prostate cancers that grow and spread fast. Cabizataxel (Jevtana) is another chemotherapy agent shown to improve survival in men with metastatic prostate cancer that have progressed on other treatments. Other chemotherapy agents such as Carboplatin have been shown to have clinically significant effects in prostate cancer and are used in later lines of therapy.

Poly (ADP-ribose) polymerase (PARP) inhibitors for prostate cancer:

A PARP inhibitor is a substance that blocks an enzyme in the cells called PARP. PARP helps repair DNA when it becomes damaged.[72] Some prostate tumors have genetic changes that limit their ability to repair DNA damage. These tumors may be sensitive to treatment with PARP inhibitors. Some men inherit genetic factors that limit their body's ability to repair DNA damage. Prostate tumors in such people can be treated with PARP inhibitors.[72] Two PARP inhibitors, Olaparib (Lynparza)[80] and rucaparib (Rubraca)[81] have been FDA approved for use alone in some men whose prostate cancer has such genetic changes and has metastasized, and whose disease has stopped responding to standard hormone treatment.[72,82] Ongoing studies are exploring the

combination of PARP inhibitors with hormone therapies. Since 2023, the FDA has approved three combinations for some men with metastatic prostate cancer. They include 1) hormone therapy enzalutamide (Xtandi) with the PARP inhibitor talazoparib (Talzenna),[83] 2) hormone therapy abiraterone (Zytiga) with the PARP inhibitor olaparib (Lynparza),[84] and 3) hormone therapy abiraterone with PARP inhibitor niraparib (Akeega).[72,85]

Immunotherapy: checkpoint inhibitors for prostate cancer:

Immunotherapies harness the power of the immune system to fight cancer. These treatments can either assist the immune system, attack the cancer directly, or stimulate the immune system in a more general way.[72] Vaccines and checkpoint inhibitors are two types of immunotherapy being tested in prostate cancer.

Pembrolizumab (Keytruda) is an immunotherapy drug approved in treating patients who have special findings on pathology called microsatellite instability high or DNA mismatch repair deficiency in cell division. This finding is present in 3-4% of men with advanced prostate cancer. There is a treatment vaccine.

A promising type of treatment vaccine called sipuleucel-T (Provenge) is FDA approved[86] for men with few to no symptoms from metastatic CRPC. Five approaches have been assessed in randomized phase III trials and sipuleucel-T has been approved as a treatment for metastatic CRPC, being the only vaccine approved to date by the FDA as a treatment for cancer.[87] Most vaccine approaches showed safety and some evidence of immunological activity but had poor clinical activity when used as monotherapies. However, increased activity has been observed when these vaccines were used in combination with other immune-modulating therapies.[87,88] Radium 223 is an FDA approved therapy which is beneficial in progression free survival and symptom improvement in treatment of men with metastatic prostate cancer mainly in bones.

Prostate-specific membrane antigen (PSMA)-targeted radiation therapy:

Scientists have developed targeted therapies based on PSMA, the same protein that is used for imaging prostate cancer. For treatment, the molecule that targets PSMA is chemically linked to a radioactive substance. The new compound can potentially find, bind to, and kill prostate cancer cells throughout the body.[72] In a recent trial, men with a type of advanced prostate cancer who receive a PSMA-targeted drug lived longer than those who received standard therapies. The trial validated the drug (Lu177-PSMA-617 (Pluvicto) that was approved by the FDA[89-91] to treat some men with metastatic prostate cancer who had previously received chemotherapy.[72] There is ongoing research to determine the efficacy of Pluvicto on men with prostate cancer who have not received chemotherapy, in earlier stages of prostate cancer, and in combination of other treatments (e.g., PARP inhibitors, immunotherapy).[72,92]

7. Continuum of care (diagnosis through remission) for patients with Prostate Cancer in South Carolina

Appropriately designed messaging and education campaigns, pilot projects, and other initiatives to improve PrCA testing and early detection of PrCA will ultimately improve access to care, improve health outcomes, and reduce inequities. However, to sustain any gains over time and dramatically improve outcomes will require incorporating PrCA screening into a continuum of care. Designing and implementing effective programs is especially challenging in rural and underserved communities in South Carolina where health professionals are in short supply, counties lack essential health infrastructure (including hospitals), social and economic factors represent real barriers to care, and mistrust is common, especially among African Americans. Thoughtful consideration and collaboration of key South Carolina county-level and regional stakeholders is a must. While PrCA screening can happen in a variety of settings, there must be primary care and specialty care (urology) to follow up with patients who present elevated PSA levels and/or abnormal DREs. When warranted, patients need access to biopsy for conclusive determination, and for some, further treatment for positive diagnoses. Following PrCA treatment, patients should be offered access to survivorship programs and annual monitoring/testing to ensure the cancer has not returned. While some of the continuum of support needs to be "brick and mortar" within the county, much of the continuum can be delivered by telehealth or mobile health units to ensure access and reduce cost. With the goodwill of health professional organizations and community leaders, continuum of care support can be a reality and will optimize health outcomes for the individual, the community, and the state.

South Carolina Prostate Health Resources
To help the public understand men's prostate health and to learn more about screening, risk factors, and support services, the following South Carolina and national resources are available:

South Carolina Department of Public Health (DPH) - Educational materials, prostate cancer information, and statewide men's health resources.

South Carolina Central Cancer Registry - Data and reports on prostate cancer trends in South Carolina for those who want deeper insight into statewide patterns.

South Carolina Cancer Alliance - Community programs, awareness initiatives, and educational tools focused on improving cancer outcomes across the state.

ZERO Prostate Cancer – ZERO360 Patient Support Program - A national program active in South Carolina that provides free, comprehensive patient navigation services to help men and families understand insurance, manage costs, and access care.

Men and their family members can learn more about prostate cancer and support services in South Carolina by visiting these organizations and/or speaking with their healthcare provider. Again, it is important for men to make informed decisions about PSA testing and their prostate health. Family members and significant others can play a role in that decision-making and education.

8. Current practice and opportunities to enhance education and messaging about Prostate Cancer in South Carolina

A coordinated statewide awareness and messaging strategy is essential to improving prostate cancer outcomes in South Carolina. This strategy should include awareness messaging aligned with Men's Health Month (June) and Prostate Cancer Awareness Month (September), culturally tailored outreach campaigns targeting high-risk men, and engagement of women as key influencers in men's health decisions. Community-based venues such as barbershops, churches, civic groups, and fraternal organizations should be leveraged to reach men where they live and gather. Digital tools, including mobile health applications and social media campaigns, can further expand reach. Additionally, SCDMV offices offer a unique, high-traffic platform for distributing prostate cancer education materials to men across the state. The messaging should be tailored to the intended audiences. For some audiences, educational materials and decision support tools will need to be developed or adapted (based on work of others). For health professionals the messaging and potential decision support may be extensive and will need to be grounded in evidence. For others, a general awareness and emotional appeal may be the optimal strategy. Regardless, greater awareness is a primary key to reducing prostate cancer occurrence and mortality in South Carolina.

Messaging and education of PrCA and importance of PrCA screening to high-risk men:
Professor Hébert has delivered compelling ideas on targeting screening of virulent prostate cancer in high-risk men. Should the SC-PCSC and the legislature agree, a primary group for messaging and education about PrCA and screening would be targeted towards high-risk men. Effectively communicating to this key stakeholder group would require very strategic and targeted messaging. The MUSC Hollings Cancer Center SC AMEN Program provides prostate cancer education and navigation to prostate cancer screening for African American men and could serve as a model and/or provide guidance for communication strategies in certain areas of the state. A "general education" approach to messaging that would translate into action would take years, if not longer, to generate substantial interest. Prostate carcinogenesis and PrCA screening are necessarily complicated and would require addressing the documented fears and uncertainties men have regarding prostate cancer screening and treatment. In research on PrCA screening and surveillance, some identified themes that have surfaced include ***Social Prompting*** (trusting professional opinion, motivation from family and friends, proximity and prominence of cancer); ***Gaining Decisional Confidence*** (overcoming fears, survival imperative, peace of mind, mental preparation, prioritizing wellbeing); ***Preserving Masculinity*** (bodily invasion, losing sexuality, threatening manhood, medical avoidance); ***Avoiding the Unknown and Uncertainties*** (taboo of cancer-related death, lacking tangible cause, physiological responses, social stigma, and ***Costs.***[93]

Messaging and education of PrCA and importance of PrCA screening to women:
Evidence suggests that women are information-seekers and can disseminate information to men and facilitate their efforts to make more informed decisions about prostate cancer screening. We have found that they also engage effectively with men to ensure adherence to lifestyle behaviors that can reduce the probability of prostate recurrence.[94] With respect to men, women have demonstrated their ability to recognize early cancer signs, and it is, therefore, relevant to include women in strategies to improve the early detection of PrCA.[95-97] Furthermore, spouses and significant others in relationships have influenced men to pursue PrCA screening through encouragement and persistent "nagging"[93]. With respect to early-stage cancer diagnosis, a

systematic review has uncovered a positive effect of being married to early stage cancer diagnosis as compared to unmarried men[98]. For this stakeholder group, it is likely that messaging should be more strategically focused / targeted than general in nature.

Messaging and education of PrCA to health professionals:
Health professionals, including primary care providers operating in rural and underserved communities, have struggled with conversations about PrCA. These struggles have been fueled by the controversies surrounding the use of PSA tests[99] and provider uncertainty about the true cost-benefit of PSA screening. Family practice physicians have reported patient interest in the discussion about screening often based on the patient's exposure to advocacy messaging/news prompt or personal relationship with an individual diagnosed with PrCA.[99] In some health professional setting, PSA conversations happen without the benefit of infographics or decision aids to support the conversation.[99] There currently exists clinical guideline-driven decision aids and tools to help educate the health professionals on latest approaches to screening as well as specific practice points aimed at assisting the provider.[100] Additionally, most health care organizations deploy an electronic health record (e.g., Epic, Cerner) that is used in clinical practice and can be designed to promote cancer screening recommendations based on specific criteria and best evidence. Messaging and the education of health professionals is often delivered via continuing medical education or continuing education seminars (in-person, virtual) and other platforms designed to help maintain and enhance clinical skills. Efforts to expand PrCA testing in primary care should optimally consider providing health provider education or training with useful decision aids/ tools to help guide discussions with patients.

Messaging and education of PrCA to communities:
Evidence suggests that community education can improve the PrCA knowledge of African American men.[97] Successful models of community education in PrCA have addressed barriers specific communities face in accessibility of screening, the screening and diagnostic process, and treatment.[97] Research has demonstrated that the methods by which patients prefer to receive education varies, and by using preferred methods and format improves participant knowledge.[97] Effectiveness of PrCA education programming has been dependent on the presenter. Community leaders / stakeholders are key to helping identify individuals credible to engage high-risk men in such sessions. Prostate cancer survivors have been deemed credible presenters and preferable to health care providers.[97]

Another strategy to promote PrCA awareness and education has been the engagement of barbershops in rural African American communities. Rural barbers have been receptive to addressing PrCA with their customers. The barbershops represent feasible venues for delivering PrCA education to high-risk men.[101] As with other cancer, diabetes, and chronic diseases and conditions, churches and pastors in rural African American communities are yet another key stakeholder in delivering messaging and education on PrCA.

Use of virtual PrCA decision tools to convey education:
While some African American men have voiced preference in interpersonal engagement in lieu of watching prepared educational videos related to PrCA screening and PrCA more generally,[101] several systematic reviews have documented the utility of leveraging mobile health (mHealth), web-based, social media, and other virtual modalities to deliver PrCA messaging and

education.[102,103] A key principle of success in deploying PrCA (and other cancer) education via virtual modalities has been a multimodal publicity effort prior to the introduction of the material.[104] There are commercially available mobile phone applications for PrCA education. One study comparatively reviewed 14 of these applications and found serious deficits. For example, none of the apps fully embraced the American Cancer Society's Prostate Cancer Prevention and Early Detection Guideline, only half had content consistent with topics inclusive with the guideline, and only 4 (about 29%) were culturally sensitive to African Americans.[104] Despite mixed results, mHealth and social medical approaches for promotion of PrCA screening and education of PrCA appear to be growing in number and typically do increase testing.[102,103,105]

Dissemination science frameworks to guide and evaluate education and awareness of PrCA:
Dissemination and implementation science intends to bridge the gap between research, practice, and policy by building a knowledge base about how health information, effective interventions, and new clinical practices, guidelines, and policies are communicated and integrated for public health and health care service use in specific settings. *Dissemination* is the targeted distribution of information and intervention materials to a specific public health or clinical practice audience. The intent is to spread knowledge and the associated evidence-based interventions.[106] Wide adoption of evidence-based, health promotion practices depend on developing and testing effective dissemination approaches.[107] There are numerous published dissemination science frameworks to shape both messaging and evaluation of that messaging. There are classic approaches, outlined in Health Behavior and Health Education: Theory, Research, and Practice, 4th [108] edition as well as contemporary approaches often with delivery facilitated in digital/electronic spaces.[109]

9. Opportunities to redesign the approach to addressing Prostate Cancer and men's health in South Carolina

Simply promoting messaging and education about PrCA in high-risk men is not enough. Although best practices exist, each community is different and what works in California or Massachusetts may very well fail here in South Carolina. Therefore, we recommend that the SC-PCSC consider developing, implementing, and evaluating men's health transformation projects situated in high-risk areas of the state. These could be aimed at enhancing PrCA screening/surveillance to identify early-stage diagnosis and treatment that will ultimately lead to reduced PrCA mortality. The transformation projects could be couched under a larger-scale men's health effort that would likely improve community buy-in and increase compliance. Two options on how to do this are offered below. One option is to focus regional transformation projects on increasing screening and coordination of treatment in PrCA, with the focus exclusively on PrCA. An alternative option would be to not focus regional transformation projects on PrCA, but rather in a cluster of screenings related to "men's health" that include PrCA screening. The potential "pros" and "cons" of each are offered.

A bundled men's health screening model offers a powerful opportunity to increase participation in prostate cancer screening while addressing broader health risks. The "South Carolina Men's Health Bundle" should include PSA testing, blood pressure screening, diabetes screening, depression screening, smoking cessation resources, and cardiovascular risk assessment. Bundling these services reduces stigma, increases efficiency, and helps men engage in preventive care. This approach recognizes that prostate cancer does not occur in isolation but is part of a larger constellation of men's health challenges that must be addressed together.

Transformation project options:

I. Regional transformation projects aimed at increasing testing and reducing prostate cancer (PrCA) mortality among high-risk men:

An approach to reducing PrCA mortality in high-risk individuals would be to conduct transformation projects delivered in regions of the state for which high-risk men reside (and mortality rate from PrCA are high). The transformation projects would generate substantial evidence on what education and early intervention modalities work; optimal strategies for dissemination and implementation of annual screening and follow-up; and expand understanding of cost for a continuum of care from prevention, screening, treatment, survivorship; and annual screening/surveillance. Strategies to determine location and transformation project leadership are identified below.

As with option II, below, a thoughtful approach to PrCA screening in transformation project counties is critically important. In addition to understanding the messaging (above) and how to roll out successful screening processes, follow-up for positive findings must be mapped and support harnessed. This includes, but is not limited to, access to urology clinics for follow-up screening, diagnosis, and treatment. For men with health insurance, the majority of costs should be covered by the health insurance plan. This is not the case for men living without health

insurance. A comprehensive process that incorporates men with and without health insurance will need to be created, implemented, and retained.

Any transformation project that targets high-risk men, especially from any given race/ethnicity, should not be exclusive (omitting other men who could be living with PrCA) but inclusive of all men in a geographic region who meet screening criteria. This being said, one way to ensure broad representation of younger at-risk men might be to consider mortality rates within a given county when determining where to start.

Potential positive considerations of regional PrCA transformation project approach:

- Will attract high-risk men into PrCA screening which would heighten the number of earlier-stage PrCA diagnosis and reduce the number/percentage of late-stage diagnoses.
- An exclusive focus on PrCA mortality reduction and active PrCA screening program is consistent with the SC-PCSC mission as identified in the initial legislative proviso;
- Implementation of PrCA screening could be delivered at multiple settings (fixed clinics, mobile health units, churches, workplace settings) targeting rural and underserved communities with poor health outcomes.

Potential negative considerations of regional PrCA transformation project approach:

- High-risk men for PrCA screening would be the focus, but because men are traditionally reluctant to seek primary health care, our transformation projects may "miss the mark" on early detection of other diseases/conditions that could have been identified with a more comprehensive men's health approach (described below); and
- While the cost of the proposed PrCA screening would be covered for the majority of men with health insurance, the cost for uninsured and underinsured men would need to be funded through some other mechanism to ensure their participation.

II. ***Alternative approach – regional transformation projects aimed at reducing premature mortality, decreasing disability, and improving quality of life associated with PrCA and other diseases and conditions within a new framework of men's health:***

An alternative approach to reducing PrCA mortality in high-risk individuals, reducing racial and ethnic mortality rate disparities for cancers, chronic disease, other conditions, and improving the overall health of men in SC might be to bundle PrCA screening under a larger targeted program on "Men's Health". This is in lieu of targeted regional transformation projects aimed exclusively at PrCA.

Primary care clinicians and outreach teams often observe a larger proportion of women seeking health care services than men. While many women pursue annual women's health screenings, perhaps influenced by federal funding for cancer and cardiovascular screening of low-income women, men are less likely to seek preventive care (to include cancer screening).

An alternative approach is to design a robust annual screening program focused on men's health that can address not only PrCA but also other conditions and diseases most likely to result in the premature death of men. A bundled men's health screening could include:

- PrCA (and other – as appropriate) cancer screening,

- blood pressure measurement,
- weight/height/BMI measurement,
- PrCA and cardiovascular-related blood tests,
- depression screening, and
- assessment of high-risk behaviors (e.g., alcohol use, smoking status, poor eating behaviors).

Measuring blood pressure is a fundamental process in clinical workflow as it is measuring weight/height. The PrCA-relevant blood tests (e.g., lipid panel, inflammation marker) are relatively inexpensive blood tests and depression screening, and assessment of high-risk behaviors is completed via surveys. The screening process can be streamlined, with effective and efficient clinical workflow, into a single 30–40-minute visit. This sort of men's health screening could be delivered via current primary health care settings (e.g., rural health clinics, FQHCs, others) and alternative settings (e.g., mobile health units, workplace).

Potential positive considerations of regional men's health transformation project approach:

- Will attract men into annual health screening;
- No need to create extensive cancer-specific PrCA messaging as this would be a component of annual men's health package;
- In addition to PrCA, health professionals would identify high-risk men for heart disease, diabetes, hypertension, depression, and other major "killers" of men; and
- Implementation of men's health screening could be delivered at multiple settings (fixed clinics, mobile health units, churches, workplace settings) targeting rural and underserved communities with poor health outcomes.

Potential negative considerations of regional men's health transformation project approach:

- High-risk men for PrCA annual screening would be a focus, but not the exclusive focus of the men's health screening process. It is possible that the attention on PrCA could be minimized as hypertension and hyperlipidemia (high cholesterol) testing results may yield need for immediate action; and
- While the cost of the proposed men's health screening bundle would be covered for the majority of men with health insurance, the cost for uninsured and underinsured would need to be covered through some other mechanism to ensure their participation.

Identifying regional transformation projects (Option I or II): Should the SC-PCSC and the legislature support the concept of conducting transformation projects via option I or II above, or some other variant, a strategy to measure the impact on both rural and underserved populations would be to carefully select sites that would represent target high-risk men. Several variables should be considered in the selection. Such variables might include:

- ***Region*** –multiple rural and underserved counties for each of the four regions of the state;
- ***Rural/Urban*** – while the majority of transformation project locations should reflect the rural nature of the state, at least one project should be anchored in an urban county with underserved residents;
- ***PrCA mortality rate*** – the mortality rate should be a consideration for transformation project locations with selection preference for the lower 50% of comparative ratings of SC counties;

- ***PrCA mortality count*** – the transformation projects should be located within counties with a prostate cancer mortality count each year that might help the SC-PCSC identify improvement; perhaps a minimum of 40. This is important to be able to reflect an observed change in mortality over time and acquire realistic expectation of project impact; and
- ***% Percentage of men who are African American*** – being an African American male is a variable that contributes to likelihood of acquiring aggressive prostate cancer; and
- ***Other*** - TBD

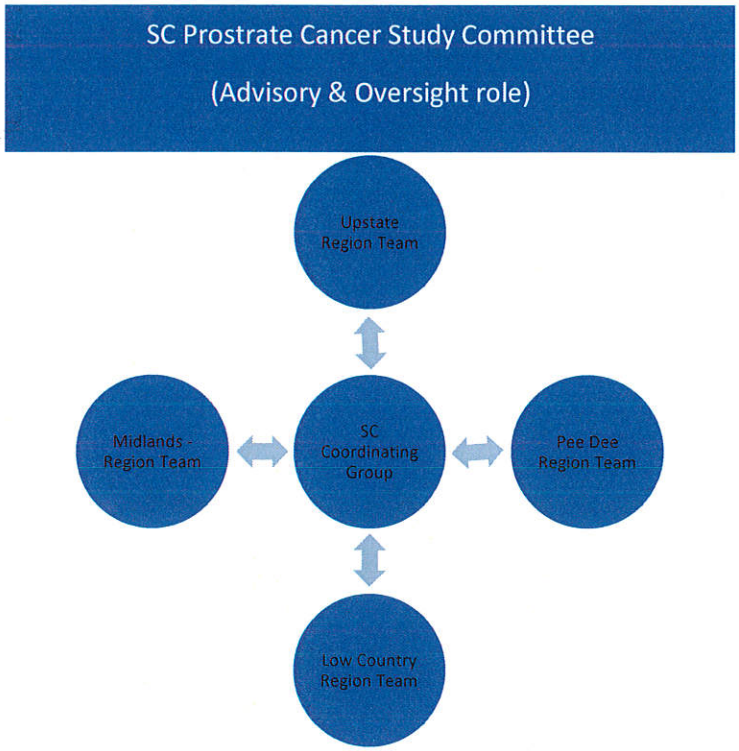
State and regional transformation project leadership and expectations: Should the regional transformation project concept be adopted and funded by the legislature, implementation will require a state-wide leader/oversight group, accountable for project performance. Figure 1 is a visual of transformation project operational structure.

The **SC Coordinating Group** will be charged with overall project leadership. The group should be led by a project director (25% commitment) and supported by a project manager (100% commitment), communication messaging specialist (TBD time), clinical consultants (part-time – e.g., urologist, oncologist, primary care, interventional radiologist), a Data & Analysis Center team, and a DPH liaison. The SC Coordinating Group will align with an existing academic center capable of receiving, analyzing and reporting data from the four regions. A funded DPH liaison should be included to assure alignment of effort between the transformation projects and existing/future DPH activities. The project director (and his/her team) will be accountable for project performance to the SC-PCSC Chair (Sen. Tom Young) or his designee. The SC Coordinating Group would create detailed common guidance that each of the four region teams will follow.

The **Regional Teams** will follow guidance from the SC Coordinating Group in organizing and preparing their transformation proposal (including budget) for the project. This guidance will be comprehensive in nature and include overall goals & objectives, selecting lead organization and leader, data reporting requirements, budget to cover uninsured and underinsured participant costs, coordination expectations/referrals between primary care and urology (other specialists within the county (if available) or region, data/metrics reporting, coordination with community organizations and other nonprofits, etc. The teams will be provided with flexibility in how they implement the project but must comply with all operating guidance; most negotiated prior to award.

As the regional transformation projects take hold, a likely outcome will be an increasing number of PrCA annual screenings delivered (and other screenings if option II is selected). With a substantial increase in PrCA testing, the incidence of PrCA will likely increase and over time represent earlier-stage diagnosis of the cancer. Within several years, a cancer stage-shift (less late-stage diagnosis) through the coordinated PrCA screening effort in transformation project counties should be realized. All regional teams will be expected to present in their proposal a plan for geographically focusing on rural and underserved communities.

Figure 1. Visual structure for regional transformation projects



Regional transformation project timeline: Below is a draft transformation project timeline that will be modified as the project unfolds. Depending on "when" transformation projects are launched, the project could be implemented as follows:

I. Core team planning – SC Coordinating Group

a. Project Director identified, contract let, and legislative funding received
b. In-person and virtual presentations to professional societies, regional stakeholders, health systems, hospitals, FQHCs, county officials (for selected counties group) begin to promote interest and proposals
c. Reach out the SC DHHS and insurance payers across SC to engage them and garner support for innovation in PrCA awareness, screening, diagnosis, treatment and survivorship as well as a larger focus on men's health
d. Overarching draft guidance for regional teams developed then reviewed/approved by the SC Prostate Cancer Study Committee (SC-PCSC)
e. Prepare core data platform and upload processes, common legal documents (e.g., BAA/DUA, other)
f. Draft a Request for Proposals (RFP) for state-wide distribution that is approved by the SC-PCSC
g. RFP formally issued for competitive submissions
h. Proposals received and critically reviewed by a selection committee
i. Final approval of selected regional teams (Core team with SC-PCSC Chair)
j. Notifications of selection and non-selection issued

II. ***Selected Regional Teams launched and organized***

a. Mission and guidance clear with teams
b. Funding received by lead institution of each regional team
c. Regional activity and reporting starts
d. Participate in coordinating meetings with SC Coordinating Group (and other Regional Teams)

III. ***Full implementation of Regional Team operations***

a. Full project ramp-up with increasing transformation project participation from health providers and patients (includes messaging, testing, confirmatory testing, biomarker testing, and when warranted biopsies)
b. Increasing numbers of PrCA testing and confirmatory repeat testing
c. Increasing numbers and use of novel biomarkers and advanced imaging to differentiate risk of high-grade PrCA
d. Coordinated collaboration across primary care, urology, radiology and oncology services in the overall testing, validation, and treatment of PrCA. Goal to adapt but not dramatically disrupt clinical workflow and timely care of patients.
e. Scheduled reporting to the data analysis center
f. Promote interim data and preliminary findings within graduate medical education, scientific conferences, community settings.

IV. ***Formal evaluation, shared lessons learned, follow-on report to SC-PCSC and legislature – while regional transformation projects continue***

a. Formal evaluation of regional transformation projects (includes pre-defined quantitative metrics (developed in section 1 and refined (when appropriate)
b. Conduct focus groups, surveys and other qualitative techniques to ensure stakeholder input and that needs were met
c. Create a master evaluation report (with data from all four region team evaluations) that provides a comprehensive review of performance and cost, lessons learned, recommendations to legislators, and other information to advise future policy

10. Recommendations of the South Carolina Prostate Cancer Study Committee

To successfully improve prostate cancer care (including better detection and treatment of aggressive PrCA, reduce unnecessary prostate biopsies, enhance and coordinate clinical workflow) in South Carolina; close gaps and reduce disparities addressed within this report; adopt new innovation and approaches in primary care, urology, and other specialty clinical practices; promote and educate men and their families about PrCA; ultimately improve men's health; and gain traction on national leadership for our state's efforts, bold leadership and commitment are required. Our response and action to deliver on these include public health activities which are necessary but not sufficient by themselves to achieve the vision. These are transformation projects that involve many disciplines, dissemination and implementation science models, multi-level (insurance payers, primary care, specialty clinics, hospitals) commitment, and a new vision for the future.

There is good news! As outlined throughout this report, innovation in screening, diagnosis, and treatment of PrCA has advanced dramatically and is poised to shape success. Innovation will drive precision in accurately predicting risk of a patient acquiring aggressive high-grade cancer, decision-making between clinicians and patients on whether to pursue biopsy, in approaches to more accurately detect clinically significant cancer and reduce infection during biopsy and offering alternative treatment modalities that will become more efficient, with less side effects and reduced recurring cancer. Academic tertiary facilities and other health systems in South Carolina are already embracing some of these innovations (e.g., focal therapies). It is changing what can be accomplished in an outpatient clinic setting and what requires hospital-level care. The recommendations below set the stage for the next steps in improving PrCA care and men's health in South Carolina.

Specific recommendations (presented without priority):

Recommendation 10-1: ***To address the shortage of urologists in South Carolina, policy makers and health officials should do the following:***

- ***Amend the Rural Provider Incentive Program to include urologists practicing in rural and underserved areas of the state;***
- ***Offer state-level grants to support capital equipment purchases such as robotic surgery platforms;***
- ***Offer tax incentives to rural hospital systems for hiring and retaining urologists; and***
- ***Provide financial incentives and/or medical school loan forgiveness assistance to urologists who commit to practicing in rural areas of the state for a specified number of years.***

Justification: Investment into increasing the availability of urologists within South Carolina and building urology infrastructure is necessary and appropriate to increase access to care and improve health outcomes as identified throughout this report.

Recommendation 10-2: ***Through public and private initiatives, South Carolina should remove financial obstacles to out-of-pocket costs covering prostate cancer screening for high-risk men.***

Justification: Out-of-pocket costs for prostate cancer screening is a challenge for some men resulting in cancer screening for many of these men not occurring. Lower income men often possess a family history of PrCA and other factors that heighten risk of the disease. If screening does not happen in high-risk men, the odds of acquiring aggressive PrCA increases with a devastating impact on the individual and his family as well as much higher costs of care. Eliminating or reducing out of pocket costs for screening in high-risk men should be a priority in the state.

Legislative efforts are underway or have already been enacted in several states to eliminate the financial burden of out-of-pocket costs for high-risk men. In addition to this approach, employers with their employer-sponsored health plans should also participate in solutions to this problem because it is undisputed that early detection of prostate cancer not only saves lives but also saves on substantial medical expenses associated with caring for and treating patients with later stage prostate cancer. Early diagnosis of prostate cancer changes both the medical trajectory and the economic trajectory of the disease. When cancer is found early, it is usually localized, easier to treat, far less expensive, and dramatically more survivable. When it is found later, treatment becomes complex, lifelong, and very costly—and survival drops sharply.

Recommendation 10-3: ***To strongly encourage alignment of effort between the SC-PCSC and DPH to ensure synergy of efforts and patient access to ongoing DPH efforts related to PrCA and men's health. This includes endorsing the use of previously allocated state funds (FY 2025) by DPH.***

Justification: It is critical that messaging to patients and the population about PrCA be aligned with the regional transformation projects to ensure that efforts are not working at cross purposes. For example, general public service advertising and promotion about PSA testing could actually harm urology clinic workflow and generate confusion.

Recommendation 10-4: ***To fund, plan, implement, maintain, and evaluate regional men's health transformation projects, outlined in Section 9 of this report.***

Justification: As described in this report, the regional transformation projects and core leadership group are key to reshaping prostate care in South Carolina and enhancing men's health. The regional projects will, by structure, ensure better coordination between primary care and specialty care, enhanced adoption of innovative approaches in prostate care (differentiation of low and high-grade cancer to guide diagnosis and appropriate care plan, enhanced approaches in prostate biopsy (increase precision in detection of cancer, reduce infection and poor outcomes), and promote innovation in prostate treatment strategies. The projects will bundle PrCA with a larger men's health focus screening for cardiovascular and other conditions that relate to prevention of PrCA and premature mortality overall. The planned evaluation will include both qualitative feedback and substantial quantitative analysis of clinical and biological data, social determinant of health data, health utilization, and cost data through a thoughtful data collection and analysis plan developed by qualified and trusted personnel.

Recommendation 10-5: ***If Recommendation 10-4 is accepted, all regional men's health transformation teams must consider and include both uninsured and underinsured individuals***

in planning and executing their projects. This is critical to ensure that existing disparities in PrCA mortality do not widen with efforts to transform PrCA and men's health within the state.

Justification: The inclusion of uninsured and underinsured patients within the regional transformation projects will be a condition of eligibility embedded within the RFP. The SC-PCSC feels strongly about this point as widened disparities from our transformative effort would be harmful. A mandatory percentage (%) of each project budget will be fenced to help offset some of these costs.

Recommendation 10-6: ***The South Carolina Department of Health and Human Services should use federal funding from the CMS Rural Health Transformation Program (RHTP) in FY2026 to support five years funding of the regional men's health transformation projects identified above.***

Justification: As outlined in Section 4 of this report, much of the South Carolina mortality from PrCA is experienced in rural and underserved communities located within rural designated counties and rural tracts within non-rural counties. The proposed regional men's health transformation projects are perfectly aligned with all five strategic goals of the CMS RHTP funding. These include: 1) making rural America healthy again (prevention & root causes), 2) sustainable access (helping rural providers improve efficiency and sustainability), 3) workforce development (attract and training specialty physicians), 4) innovative care (early detection of cancer, improved outcomes, coordination of care, improving quality), and 5) tech innovation (technologies to improve precision, efficient delivery of care, remote care access, data sharing).

Recommendation 10-7: ***To extend the South Carolina Prostate Cancer Study Committee until funding of the regional men's health transformation projects (Recommendations 10-4, 10-5, & 10-6) is secured for the Recommendations as outlined herein.***

Justification: Extending the SC-PCSC operational charge will support the Committee Chair and other legislative members, will ensure accountable oversight for the regional transformation projects and moving forward via the SC Coordinating Group, will ensure legislative members receive updates about progress and challenges of the projects, and will maintain high visibility to help ensure broad exposure and commitment to PrCA detection and treatment and men's health more generally.

Recommendation 10-8: ***South Carolina should adopt a standardized PSA-communication framework for all laboratories, primary care practices, and urology clinics.***

Justification: To improve clarity and reduce confusion among patients, South Carolina should adopt a standardized PSA-communication framework for all laboratories, primary care practices, and urology clinics. This framework should include a plain-language explanation of what PSA measures, how values should be interpreted over time, and why PSA is not a definitive cancer test. Each PSA report should include a brief "What Your PSA Means" insert, a risk-based screening age guide, a PSA tracking table for patients, and a list of South Carolina prostate health resources. Standardizing communication will help men make informed decisions and reduce both unnecessary anxiety and false reassurance.

Recommendation 10-9: ***To further ensure that more men are tested to diagnose at earlier stages of PrCA, health officials, health systems, hospitals and other organizations should encourage primary care physicians, urologists, and other health care professionals to include PSA in routine blood testing of men beginning at age 40 for high-risk men and age 45 for men in general. This should also include SCDHHS adjusting the age limitation for Medicaid coverage of prostate cancer screening from the age of 55+ to 50+ to improve access to early diagnosis and treatment.***

Justification: Inconsistencies exist when PSA testing is done leading to PrCA diagnoses occurring at later stages for some men. The implementation of the above recommendation will undoubtedly lead to earlier detection and saving of lives in South Carolina. Through the regional transformation project teams and the SC-PCSC support from various payers and medical professional organizations will occur to help garner support and insurance coverage for the recommendation.

Recommendation 10-10: ***To improve outcomes in South Carolina, the state should develop a statewide, tailored education effort that engages high-risk men, women as health influencers, and health care providers, leverages multiple partner organizations such as SCDMV offices, and delivers clear, plain-language PSA messages and prostate cancer awareness tools for men. Additionally, employers with employer-sponsored health plans are encouraged to implement prostate cancer awareness initiatives including the importance of screening and early detection.***

Justification: A statewide, coordinated prostate cancer awareness strategy is critical for improving outcomes in South Carolina. Efforts should align with national health observances, use culturally tailored outreach for high-risk men, and involve women as key influencers. Messaging should reach men through community venues like barbershops, churches, and civic groups, as well as digital tools and high-traffic locations such as SCDMV offices. Materials must be tailored to each audience—ranging from evidence-based decision support for health professionals to simple, emotionally resonant messages for the general public. Ultimately, expanding awareness is essential to reducing prostate cancer incidence and mortality across the state. Furthermore, there are men's health initiatives that support the improvement of men's overall health that should not be ignored or minimized. This Committee supports those initiatives while presenting this report and recommendations in response to a specific legislative charge regarding prostate cancer awareness and the problem of prostate cancer occurrence and mortality in South Carolina. Finally, the Committee encourages employers with employer-sponsored health plans to educate employees and their dependents as to the importance of prostate cancer screening and to cover the costs of prostate cancer screenings in high-risk men.

11. Funding Strategies and Summary

Implementing these initiatives will require strategic investment, but multiple funding pathways are available. The state may leverage federal funding from CMS, the Centers for Disease Control and Prevention, the Health Resources and Services Administration, and the National Institutes of Health; partner with hospital systems, insurers, and nonprofit organizations; and pursue public-private partnerships to support pilot programs and workforce incentives. Modest state appropriations can unlock significant matching funds and accelerate progress. A clear funding strategy will ensure sustainability and maximize the return on investment for South Carolina's men and families.

Summary: The SC-PCSC believes that implementing the recommendations above will transform prostate screening, prostate cancer treatment/prevention, and men's health in South Carolina. Through the regional men's health transformation projects, the teams will follow common guidance (across teams) while addressing regional variation. Substantial attention will accomplish the following: 1) focus on the increased use of novel biomarkers to accurately predict risk of acquiring high-grade aggressive cancer; 2) target vulnerable men in the state (many in their 40's) who are at risk of high-grade cancer; 3) promote contemporary approaches to the prostate cancer biopsy that may ultimately replace the TRUS prostate biopsy as a standard of care; 4) promote alternatives to existing surgical approaches of whole prostate ablation such as focal therapies; 5) reach rural and underserved South Carolinian men and successfully engage them in PrCA screening while improving their overall health. The investment in attracting and supporting additional urologists to help shape the transformation is essential.

To support implementation, the following actions are recommended:

- extend the SC-PCSC;
- remove or reduce cost-sharing for PSA screening for high-risk men;
- fund regional men's health transformation projects;
- expand rural provider incentives to include urologists;
- require standardized PSA communication materials;
- launch a statewide awareness campaign;
- integrate prostate cancer messaging into SCDMV offices; and
- encourage earlier PSA testing beginning at age 40 for high-risk men and age 45 for others (as funding becomes available).

This strategy provides a roadmap for policymakers to advance prostate cancer prevention and awareness across South Carolina which ultimately will save lives and make South Carolina a national leader in Prostate Cancer care, awareness, and prevention.

Respectfully submitted for the committee,

Tom Young, SC Senate, District 24
Chairman

12. Abbreviations

ADT	Androgen deprivation therapy
AUA	American Urological Association
BAA	Business associate agreement
BMI	Body mass indicator
CRPC	Castration-resistant prostate cancer
CT	Computed tomography
DRE	Digital rectal examination
DPH	SC Department of Public Health
DUA	Data Use Agreement
DNA	Deoxyribonucleic acid
ED	Erectile dysfunction
EPI	ExsomeDX™ Prostate Intelliscore
FC	Focal cryotherapy
FDA	U.S. Food and Drug Administration
FLA	Focal laser ablation
FQHCs	Federally qualified health centers
HIFU	High intensity focused ultrasound
IV	Intravenous
IRE	Irreversible electroporation
MFGB	Magnetic resonance-ultrasound fusion biopsy
MIR	Mortality and incident
MPS2	MyProstateScore2.0
MRI	Magnetic resonance imaging
mpMRI	Multiparametric magnetic resonance imaging
NPV	Negative predictive value
PARP	Prostate-specific membrane antigen
PDT	Photodynamic therapy
PGA	Partial gland ablation
PBMs	Pharmacy benefit managers
PrCA	Prostate cancer
PSA	Prostate-specific antigen
PSMA PET	Prostate-specific membrane antigen positron emission tomography
RFP	Request for proposal
RHCs	Rural health centers
SC-PCSC	South Carolina Prostate Cancer Study Committee
SCDHHS	South Carolina Department of Health and Human Services
TBD	To be determined
TP	Transperineal
TR	Transrectal
TRUS	Transrectal ultrasound
TULSA	Transurethral ultrasound ablation
US	Ultrasound
VA	U.S. Veterans Affairs

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