



A guide to understanding **Prostate Cancer**  
in Caribbean communities



St. George's University  
SCHOOL OF MEDICINE

Grenada, West Indies

# Contents

Overview.....	3
The Authors.....	4
Section 1: Prostate Cancer, Signs and Symptoms.....	5
What is Cancer?.....	5
What is Prostate Cancer?.....	6
Signs and Symptoms.....	7
Prostate Cancer vs Benign Prostatic Hyperplasia (BPH).....	7
Prostate Cancer in the Caribbean.....	8
Section 2: Lowering Risk of Prostate Cancer .....	9
Risk Factors for Prostate Cancer.....	9
Lowering Risk of Prostate Cancer.....	10
Section 3: Prostate Cancer Screening, Diagnosis, and Treatment.....	11
Screening for Prostate Cancer.....	11
Prostate Specific Antigen (PSA).....	11
Digital Rectal Examination (DRE).....	11
Diagnosis.....	12
Treatment.....	12
Treatment plan.....	13
During treatment.....	13
After treatment.....	13
Mental and Psychological Support.....	14
Barriers That Can Lead to Poor Outcomes.....	14
Section IV: Additional Information and Resources.....	15
Acknowledgements.....	16
Test your Knowledge.....	17

# Overview

Prostate cancer disproportionately affects black men compared to white men<sup>1</sup>. Prostate cancer mortality in the Caribbean region is amongst the highest in the world<sup>2</sup>.

There is still a lack of knowledge about prostate cancer among people in Caribbean communities. Cultural behaviors and beliefs, including the perception of diseases as a spiritual outcome, self-diagnosis, and self care also prevent timely diagnosis and treatment of men affected by prostate cancer.

This Manual was produced to provide information and increase awareness of prostate cancer, including symptoms of the disease, risk factors, screening, and treatments. The information can be used by both men and women. The information is expected to help men make informed and timely decisions to prevent and manage prostate cancer and to access care as needed following diagnosis of the disease.

The Manual is divided into **3 sections**:

1. Basic information about cancer and prostate cancer
2. Cancer risk, signs and symptoms
3. Prostate cancer prevention, screening and treatment

Illustrated materials also accompany this Manual to help users better understand and engage with the information. A short quiz is included at the end of the Manual to help users check their knowledge after interacting with the materials.

<sup>1</sup> Pedersen, V. H., Armes, J., & Ream, E. (2011). *Perceptions of prostate cancer in Black African and Black Caribbean men: a systematic review of the literature*. *Psycho-Oncology*, 21(5), 457-468. doi:10.1002/pon.2043

<sup>2</sup> Persaud, S., Persaud, M., Goetz, L., & Narinesingh, D. (2018). *The current state of prostate cancer treatment in Trinidad and Tobago*. *Ecancermedicalscience*, 12. doi:10.3332/ecancer.2018.828

# The Authors



**Justin Goolcharan, M.D., MPH (Candidate)** is a medical doctor from Trinidad and Tobago. He is currently a psychiatric resident at Carilion Clinic in the USA and currently pursuing the Masters in Public Health degree at the institution.



**Patricia Oribabor, M.D., MPH (Candidate)** is from San Jose, California. She received her medical degree from St George's University School of Medicine and is currently pursuing the Masters in Public Health degree at the institution. She is looking forward to starting her residency in 2023. Patricia enjoys travelling and spending time with her family and friends.



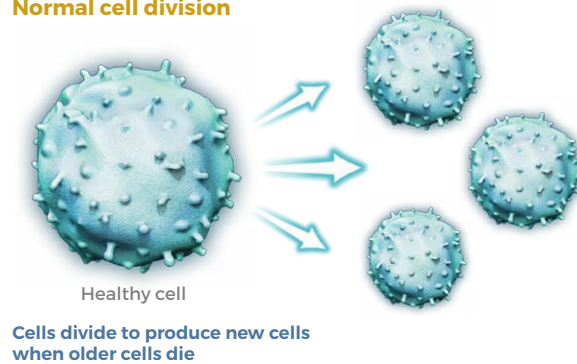
**Amandeep Sehra, M.D., MPH (Candidate)** is from Vancouver, Canada. He received his MD from St. George's University School of Medicine and is currently pursuing the Masters in Public Health degree at the institution. Amandeep is completing the second year of pediatric residency and is looking forward to practicing pediatric critical care medicine.

# Section 1: Prostate Cancer, Signs and Symptoms

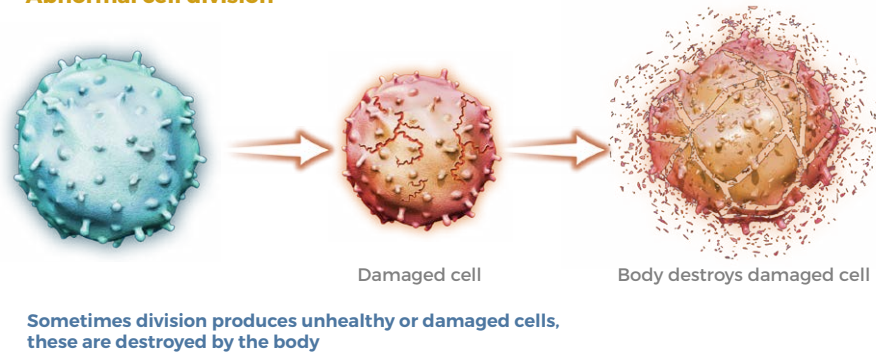
## What is Cancer?

The human body is made up of smaller units called **cells**. Cells divide to produce new cells when older cells die. The body regulates or manages the production of new cells and destroys old or dysfunctional cells.

### Normal cell division

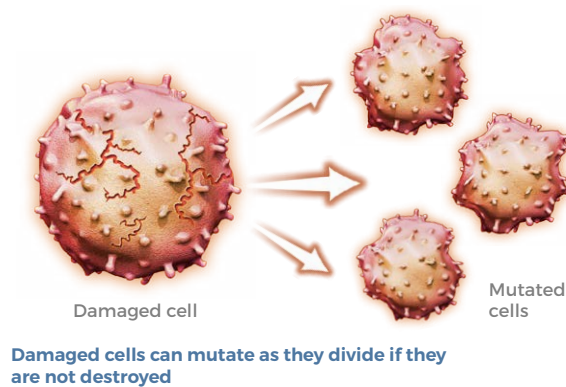


### Abnormal cell division

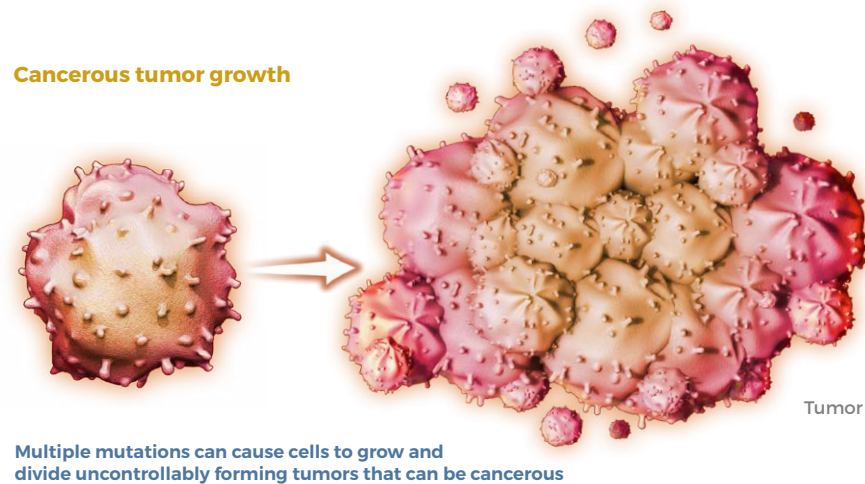


**Tumors** occur when there is a breakdown in this process of the production of new cells and destruction of old or dysfunctional cells. This breakdown in the process causes cells to grow and divide uncontrollably forming tumors.

### Damaged cell division



### Cancerous tumor growth





Tumors can be **benign** or **malignant**. **Benign tumors** are not considered to be cancerous as they do not spread to other parts of the body or invade other tissues.

**Malignant tumors** grow to invade surrounding tissues and may also spread to different parts of the body. Spreading of the cancer to other parts of the body is known as **metastasis**.

**Cancers** are most treatable when discovered early. The disease can be treated by surgical removal of the tumor, chemotherapy, and/or radiation, or other forms of treatment.

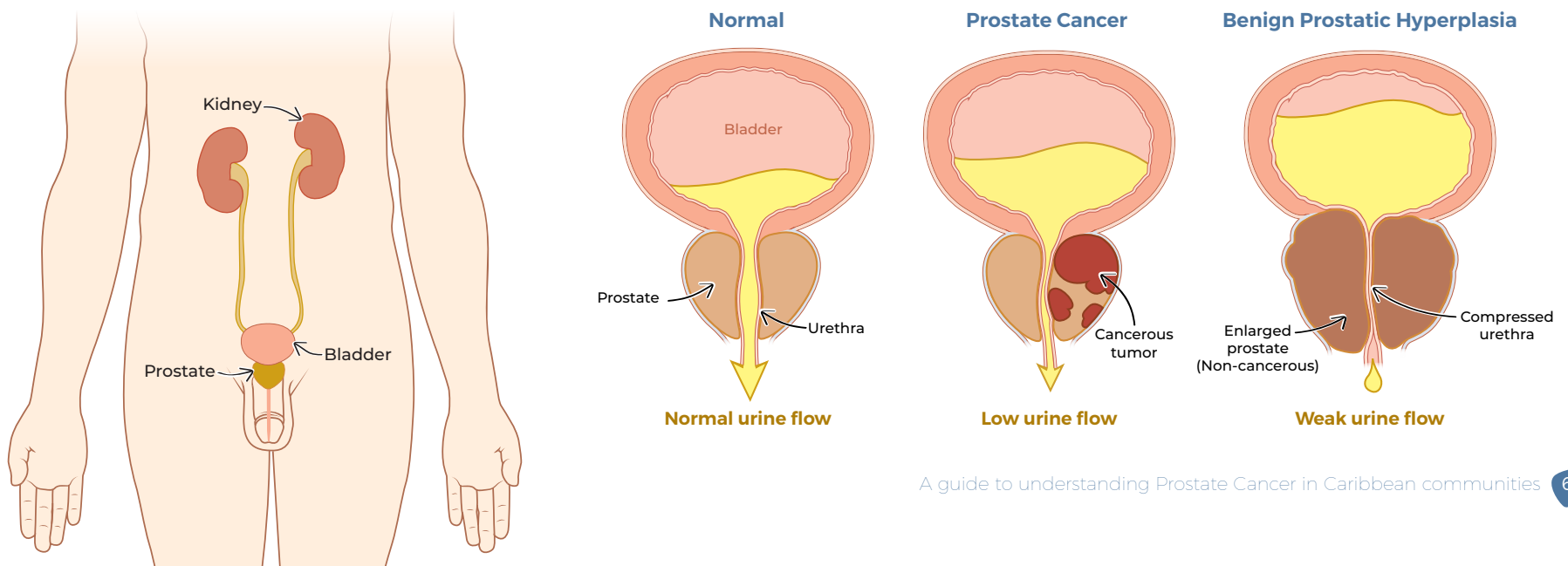
When a cancer metastasizes or spreads to other parts of the body it is often very difficult to treat and the condition is associated with a very high risk of death.

## What is Prostate Cancer?

The **prostate** is a sphere-shaped gland in males. The gland is located below the bladder (organ which stores urine) and makes some of the fluid contained in semen. The urethra (tube which carries semen and urine) passes through the **prostate**.

**Cancer** occurs in the prostate when the cells divide uncontrollably and creates a malignant tumor.

**Prostate cancer** can be aggressive and **metastasize** to other parts of the body causing a life threatening condition. Prostate cancer usually affects cells on the sides of the prostate and most commonly metastasizes to the bone, drastically increasing the risk of death.



## Signs and Symptoms

Prostate cancer in its mild form does not cause symptoms. As the disease advances, the symptoms become more obvious. Rather than seeing their doctor for regular health checks, some men ignore early symptoms, which could potentially lead to poor diagnosis later. Prostate cancer symptoms include the following:

- Problems urinating, including a slow or weak urinary stream or the need to urinate more often, especially at night
- Blood in the urine or semen
- Trouble getting an erection (erectile dysfunction or ED)
- Pain in the hips, back (spine), chest (ribs), or other areas from cancer that has spread to bones
- Weakness or numbness in the legs or feet, or even loss of bladder or bowel control from cancer pressing on the spinal cord

Some of these symptoms can be due to other health problems. It is important to get regular health checks to determine the cause of symptoms.

## Prostate Cancer vs Benign Prostatic Hyperplasia (BPH)

**Benign Prostatic Hyperplasia (BPH)** is a non-cancerous growth of cells within the prostate and should not be confused with prostate cancer.

BPH is a non-cancerous tumor that does not metastasize (spread to other parts of the body) and is not associated with an increased risk of death. BPH is also called

Problems urinating  
(Slow stream/going frequently)



Blood in urine or semen



Erectile dysfunction



Pain in bones where cancer has spread



Tingling/numbness in legs or feet



prostate gland enlargement and usually occurs as men get older. Unlike prostate cancer which usually affects the cells on the sides of the prostate, BPH mainly affects the cells at the center of the prostate. BPH may affect one's ability to start and/or maintain a steady urine stream as the tumor pushes against the tube through which the urine passes (**urethra**). The table below shows a summary of differences between BPH and prostate cancer.

### Enlarged prostate vs Prostate cancer

BPH	Prostate cancer
Non-cancerous cells	Cancer cells are present
Centre of the prostate is affected	Sides of the prostate are more affected
PSA levels increased	PSA levels increased
Normal enlargement due to aging	Abnormal enlargement/tumor
Does not spread	Does spread
Not life-threatening	Can be life-threatening

*Table Data from CK Birla Hospital. <https://www.ckbhospital.com>*

## Prostate Cancer in the Caribbean

The lack of knowledge about prostate cancer, especially as it relates to personal risk, misinformed beliefs about health, unhealthy practices, and poor health seeking behaviors are some of the contributing factors to the disproportionate diagnosis and death related to prostate cancer among black men in the Caribbean.

Cancer is the second leading cause of death in the Caribbean. Among Caribbean women breast cancer accounts for 30% of cancer deaths while, amongst Caribbean men, prostate cancer accounts for up to 47% of cancer deaths. Prostate cancer is the leading cause of death among Afro-Caribbean men<sup>3</sup>.

<sup>3</sup> Garca, G. (2016, Dec 16th). Breast Cancer is two Times Higher in The Caribbean compared to the USA. Caribbean Public Health Agency. <https://carpha.org/More/Media/Articles/ArticleID/168/Breast-Cancer-is-Two-Times-Higher-in-the-Caribbean-Compared-to-the-USA>



## Section 2: Lowering Risk of Prostate Cancer

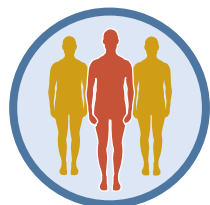
### Risk Factors for Prostate Cancer

Anything that increases the likelihood of getting a disease is known as a risk factor. Risk factors vary dependent on age, genetics, exposures, or behaviors. Some risk factors can be changed or removed leading to reversal in the course of an illness while other risks are not modifiable.

Risk factors for prostate cancer include: **age, family history, race, diet, occupational exposure.**



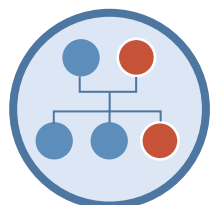
**Age:** The chances of getting prostate cancer increases after age 50.



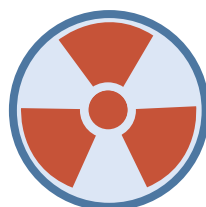
**Race/Ethnicity:** African American and Caribbean men have a higher incidence of prostate cancer compared to other races. It is unclear why this difference occurs.



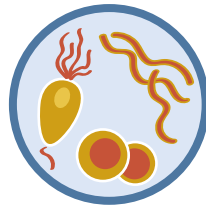
**Geography:** Prostate cancer is common in the Caribbean, North America, Europe, and Australia. One reason could be due to more intensive test done, another could be due to the lifestyle choices.



**Family History:** Genetics have been linked to prostate cancer. If a man has a relative that has prostate cancer there is a higher risk of him having prostate cancer. It is important to note that men with no family history can also develop prostate cancer.



**Chemicals:** The World Health Organization has reported that thousands of chemicals in our environment are carcinogenic – that is, they have the potential to cause cancer.



**Sexually Transmitted Infection:** No particular study has linked sexually transmitted infections to prostate cancer but these infections cause inflammation of the prostate.



**Gene Mutation:** Mutated genes increase the risk of prostate cancer. Men with Lynch syndrome (also known as hereditary non-polyposis colorectal cancer or HNPCC), a condition due to inherited gene changes, have an increased risk of prostate cancer as well as other cancers.

## Lowering Risk of Prostate Cancer

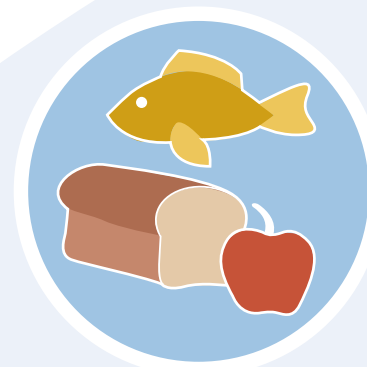
Extensive research has been done into environmental and genetic factors that lead to prostate cancer. Unfortunately there is no conclusive evidence of ways to prevent prostate cancer. Nonetheless, studies have shown there are ways to reduce the risk of onset of the disease.

To help reduce the risk of prostate cancer:

- Maintain a healthy weight with regular exercise
- Eating healthy foods including more fruits and vegetables
- Minimize dairy products and red meat consumption
- Avoid smoking
- Drink alcohol in moderation
- See your doctor regularly to check for high blood pressure, diabetes and high cholesterol
- Eat more fish to increase Omega-3 fatty acids
- Reduce stress
- Increase vitamin D intake



Drink alcohol in moderation



Eat a healthy diet  
(minimize dairy/red meat)



Visit your doctor  
regularly



Get regular exercise



Quit smoking



Reduce stress

## Section 3: Prostate Cancer Screening, Diagnosis, and Treatment

### Screening for Prostate Cancer

#### Prostate Specific Antigen (PSA)

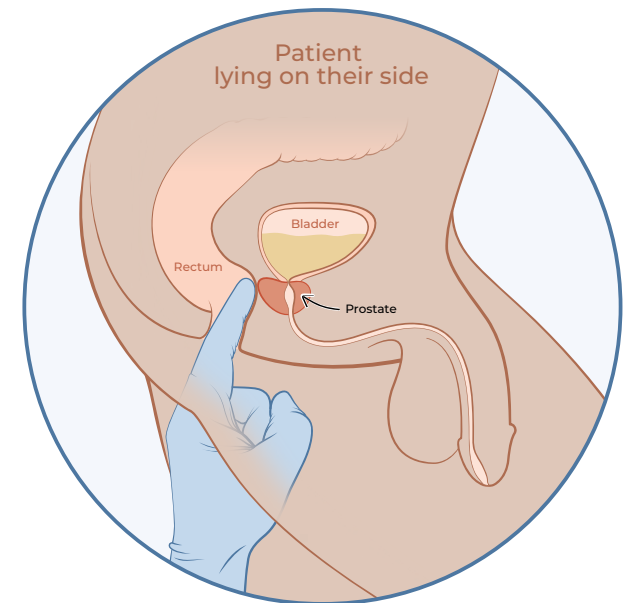
Prostate Specific Antigen (PSA) is a protein produced by both cancerous and non-cancerous cells in the prostate. According to the United States Preventive Services Task Force (USPSTF) for men aged 55-69 years, PSA screening should be performed on a routine basis and also has potential benefit of reducing the chance of death from prostate cancer in some men. PSA screening is not usually recommended for men 70 years or older.

Guidelines are available in several countries to guide prostate cancer screening. In the Caribbean, international guidelines are generally used to guide prostate cancer screening. The United States guidelines indicate a PSA level above 4ng/mL of blood is typically associated with prostate cancer.

#### Digital Rectal Examination (DRE)

A Digital Rectal Examination (DRE) is conducted by a physician to examine the lower rectum, pelvis, and lower abdomen. The physician inserts a lubricated, gloved finger into the rectum (anus) and feels the size of the prostate gland and checks for bumps, soft or hard spots, or other abnormal areas.

An abnormal PSA or DRE does not confirm prostate cancer. If the PSA or DRE test is abnormal, a biopsy is usually recommended. A biopsy is the removal of a small piece of tissue or cells for analysis. The sample is sent to the laboratory for further examination to confirm if the man has prostate cancer.



## Diagnosis

A diagnosis of prostate cancer can cause distress and uncertainty about what to do. The following questions can help patients get relevant information about their condition.

*Has the cancer spread beyond the prostate?  
What other test needs to be done before deciding on a treatment plan?*

## Treatment

One of the most commonly asked questions is whether there are medications that can help treat prostate cancer. Often men who have BPH are treated with dihydrotestosterone (DHT) reducing drugs. This can potentially reduce cancer risk by 25%. Men who develop cancer while on the drug may also experience a more aggressive form of the disease.

There are many different methods of treatment dependent on the stage of cancer. A multidisciplinary team of practitioners may be involved in the care of the patient. If the cancer is slow growing or low-grade, the physical may suggest watchful waiting and using active surveillance to monitor the disease. If deemed to be more severe then more invasive measures such as surgery, radiation, or chemotherapy may be necessary. Some important questions to discuss with care providers are:

*Which treatment is best for me?  
What are the pros and cons of each treatment option?*

## Treatment plan

Patients may have difficulty deciding on a treatment plan. A plan should be worked out in consultation with professional caregivers. Some questions that should be considered and discussed with care providers to help in deciding on a treatment plan are:

*Will this treatment option make me impotent or sterile?*  
*What side effects should I expect from each treatment option?*  
*Should I wait and watch or start treatment immediately?*  
*Is surgery or radiation a better option for me?*  
*Will the treatment cause urinary problems for me?*  
*How soon do I need to make a decision on a treatment plan?*

## During treatment

When treatment begins it is important to know what to expect. Answers to these questions can help patients know what to expect during treatment.

*What side effects should I expect?*  
*Does my diet need to change during treatment?*  
*How do I know if the treatment is working?*  
*Is there a support group to talk to others who have gone through this?*

## After treatment

While patients may experience relief after completing treatment, it is still important to do follow-up checks and ask pertinent questions.

*What tests do I need to do after my treatment?*  
*How often do I need to follow up with my doctor?*  
*Will my cancer come back?*  
*What can I do if it comes back?*  
*What symptoms should I look out for?*

## Mental and Psychological Support

The diagnosis of prostate cancer can have a negative effect on mental and psychological health. Depression, anxiety, sexual dysfunction and intimacy problems can arise. The health and wellbeing of other family members who provide care and financial and other support may also be negatively impacted. Patients and family members should seek the necessary support from counselors and other mental and psychological health professionals to enhance response and coping skills.

## Barriers That Can Lead to Poor Outcomes

- Not enough emphasis on preventative medicine, routine health checks and accessing healthcare
- Waiting to seek health care until after feeling “sick”
- Avoidance of digital rectal examination
- Lack of facilities to provide appropriate treatment and care
- High out-of-pocket cost for treatment and care services
- Scarcity of healthcare workers (doctors, nurses) with specialized training to diagnose, treat and care for patients affected by cancer



## Section IV: Additional Information and Resources

Additional information and resources on prostate cancer can be found on the following websites:

<https://caribcan.org/>

<https://www.cdc.gov/cancer/prostate/index.htm>

<https://www.cancer.gov/types/prostate>

# Acknowledgements

This Manual was produced as part of our practicum requirements in the Masters of Public Health program at St. George's University in Grenada. We extend special thank you to Dr. Lindonne Glasgow who supervised this project and provided invaluable support and assistance in the development of this Manual. Special thanks to the Practicum Coordinator, Mrs. Liselle Romain, for extending the call for students to undertake this project. Our gratitude is extended to Sue Simon, Lucia Garces and David Nahabedian of the Center for BioMedial Visualization at St. George's University for the creation of the illustrations and formatting of this Manual publication. Finally, we extend thanks to Dr. Owen Gabriel and Dr. Shawn Charles for reviewing the contents of this Manual and making inputs. We hope this Manual will be of value to improve the health of men in the Caribbean.

*Patricia, Justin, Amandeep*

# Test your Knowledge

Cancer is caused by cells growing uncontrollably

---

Prostate cancer is usually asymptomatic in the early stage of the disease

---

An elevated PSA is a typical symptom of prostate cancer

---

Benign prostatic hyperplasia (BPH) leads to prostate cancer

---

There is no treatment for prostate cancer

---

Men less than 40 years old are at higher risk of prostate cancer

---

Prostate cancer is the leading cause of cancer death in Afro-Caribbean men

---

What antigen is produced by the prostate that increases in the presence of prostate cancer?

- A. Carcinoembryonic Antigen (CEA)
  - B. Alpha-fetoprotein (AFP)
  - C. Prostate Specific Antigen (PSA)
- 

What are some symptoms of prostate cancer?

- A. Trouble getting an erection
- B. Problems urinating
- C. Blood in the urine or semen
- D. All the above