CheapNursingCEUs.com

Prostate Cancer

Introduction

Research presented by the Centers for Disease Control and Prevention (CDC) indicates that prostate cancer is one of the most common cancers among men, and the second leading cause of cancer death among men in the United States. Therefore, health care professionals should possess insight into prostate cancer in order to optimize patient care. This course reviews concepts central to prostate cancer, while highlighting methods to prevent and treat prostate cancer. This course also reviews prostate cancer case studies to build awareness among health care professionals.

Section 1: Prostate Cancer

Case Study 1

A 54-year-old male patient, named Frank, presents to a health care facility with the following signs/symptoms: difficulty urinating, blood in the urine, and back pain. Upon questioning from a health care professional, Frank reports that his "urine flow is weak, and has been for a while." The patient then goes on to report that he was not "too concerned" about his urine flow until he noticed "blood coming out." Frank also reports that he has not "been to a doctor" in "at least five years." A patient examination reveals that Frank is 5'9'' and 225 pounds. When the patient examination is completed, Frank asks the health care professional questions about cancer. As the health care professional begins to answer Frank's questions, Frank tells the health care professional that talking about cancer makes him feel "stressed out" and "anxious."

Case Study 2

A 51-year-old male patient, named Jim, presents to a health care facility. Jim reports that he noticed blood in his semen. Questioning from a health care professional reveals that Jim believes he has a sexually transmitted infection (STI) because it "burns" when he urinates. Jim also reveals that he had both chlamydia and gonorrhea in the past ten years. Further questioning from a health care professional reveals that Jim "frequently" engages in unprotected sex with both men and women, and "occasionally uses drugs." Jim goes on to say that he is not interested in changing his "lifestyle" because he is "having a great time." Although Jim is slightly concerned because he recently had to "use naloxone" because he "took too many Oxies."

A medication reconciliation reveals that Jim is prescribed both lisinopril and Zoloft - however, Jim notes that he does not take his "medications every day." Further questioning about Jim's medications reveals a history of poor medication adherence. Jim tells the health care professional that he is "not interested" in taking "a lot of medications." Jim also tells the health care professional that he smokes "at least a pack a day." The health care professional asks Jim if he is interested in stopping tobacco use. Jim simply says "no." Jim goes on to say that he "hopes nothing is seriously wrong" with him because he experienced "enough trauma" in his life when his father "died from prostate cancer." Jim then asks the health care professional if he should "take a prostate cancer test."

Case Study 3

Arnold, a 49-year-old African American man, reports to a health care facility for a digital rectal exam (DRE). Arnold scheduled the DRE because his brother was recently diagnosed with prostate cancer. Arnold is admittedly nervous about the DRE, and is not sure what is going to happen.

Upon questioning from a health care professional, Arnold reports that his "urine flow is not the same." Further questioning reveals that Arnold's urine flow is weak. Arnold also reports that he is "using the bathroom" more often. Further questioning from a health care professional reveals that Arnold is having problems concentrating, focusing, and is often angry and distressed. Arnold also reports that he lost his appetite, and is not "eating a lot." Additionally, Arnold reports that he is having trouble sleeping. Arnold notes that he goes to sleep at his "normal time," but "wakes up early and cannot fall back to sleep." Arnold tells the health care professional that he is concerned about his "sleep problems," however he is even more concerned about the potential for prostate cancer.

After Arnold uses the bathroom, he undergoes the DRE. The health care professional conducting the DRE notes a hard area on the prostate. Subsequently, the health care professional orders a prostate-specific antigen (PSA) blood test. The PSA blood test indicates a PSA level of 4.5 ng/ml.

The case studies presented above highlight patients that may have prostate cancer. The question is, what should health care professionals know about prostate cancer to best serve patients in need? This section of the course will answer that very question. The information found within this section of the course was derived from materials provided

by the Centers for Disease Control and Prevention (CDC) unless, otherwise, specified (Centers for Disease Control and Prevention [CDC], 2022).

What is prostate cancer?

- Prostate cancer may refer to a type of cancer that is characterized by abnormal cell growth in the prostate, which is a small gland in men that helps produce semen.
- Health care professionals should note that cancer may refer to a disease characterized by abnormal cell growth.
- Health care professionals should also note the following: the prostate is located below the bladder in front of the rectum; the prostate is about the size of a walnut and surrounds the urethra (note: the urethra may refer to the tube that empties urine from the bladder); the prostate produces fluid that makes up a part of semen.

Who is at risk for prostate cancer?

- All men are at risk for prostate cancer.
- Health care professionals should note that research presented by the CDC indicates that out of every 100 American men, about 13 will get prostate cancer during their lifetime, and approximately two to three men will die from prostate cancer.

What are the risk factors for prostate cancer?

The risk factors for prostate cancer include the following: age, race/ethnicity, family history, gene changes, Lynch syndrome, geography, diet, a lack of physical activity, obesity, tobacco use, chemical exposure, prostatitis, sexually transmitted infections (STIs), and having a vasectomy. Specific information regarding the aforementioned risk factors for prostate cancer may be found below. The information found below was derived from materials provided by the American Cancer Society unless, otherwise, specified (American Cancer Society, 2020).

- **Age** - the most common risk factor for prostate cancer is age. Health care professionals should note the following: the chance of developing prostate cancer increases after the age of 50; approximately six in 10 cases of prostate cancer are found in men older than 65.

- **Race/ethnicity** - African American men and Caribbean men are at increased risk for prostate cancer. Health care professionals should note that research presented by the CDC indicates that African American men are more than twice as likely to die from prostate cancer than other men; African American men typically develop prostate cancer at a younger age, and tend to have a more severe type of prostate cancer than other men.

- **Family history** - genetic factors may put some men at higher risk of prostate cancer. Health care professionals should note that men with a first-degree relative (e.g., father, son, or brother) with a history of prostate cancer may be at increased risk for prostate cancer.

- **Gene changes** - inherited mutations of the BRCA1 or BRCA2 genes can increase prostate cancer risk in men.

- **Lynch syndrome** - Lynch syndrome may refer to an inherited condition that increases the risk of cancer. Lynch syndrome is caused by an inherited defect in either the MLH1, MSH2 or MSH6 gene. Health care professionals should note that men with Lynch syndrome have an increased risk for a number of cancers, including prostate cancer.

- **Geography** - prostate cancer is more common in North America, northwestern Europe, Australia, and on Caribbean islands.

- **Diet** - diet, or more specifically a diet high in dairy products, is a risk factor for prostate cancer. Health care professionals should note that some studies suggest that men who consume a lot of calcium (through food or supplements) may have a higher risk of developing prostate cancer when compared to other men.

- **Lack of physical activity** - a lack of physical activity is a risk factor for prostate cancer (note: the term physical activity may refer to any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above a basal level) (U.S. Department of Health and Human Services, 2018). Health care professionals should note that a lack of physical activity may lead to

or contribute to a sedentary lifestyle, which may further increase the risk for prostate cancer (note: the term sedentary lifestyle may refer to an inactive lifestyle characterized by extended periods of sitting or laying down, with little to no physical activity).

- **Obesity** - individuals who are obese, or overweight, are at risk for prostate cancer. Specific information regarding obesity may be found below. The information found below was derived from materials provided by the CDC (CDC, 2022).
    - Obesity may refer to a condition characterized by abnormal or excessive fat accumulation, which may impair health.
    - The fundamental cause of obesity is an energy imbalance between the calories consumed and the calories expended.
    - An individual may be considered to be obese when his or her body mass index (BMI) is greater than or equal to 30 kg/m^2; body mass index (BMI) may refer to a value derived from an individual's height and weight.
    - Health care professionals may use the following formula to calculate an individual's BMI: BMI = weight (kg) / height $(m)^2$; health care professionals may also use the following formula to calculate an individual's BMI: BMI = weight (lb) / $[height\ (in)]^2$ x 703.
    - Health care professionals should note that BMI does not measure body fat directly.
    - Health care professionals should note the following: BMI can be used to help determine if an individual is underweight, at a normal weight, overweight, or obese.
    - Underweight - an individual may be considered to be underweight if his or her BMI is less than 18.5 kg/m^2.
    - Normal weight - an individual may be considered to be at a normal weight if his or her BMI is between 18.5 - 24.9 kg/m^2.
    - Overweight - an individual may be considered to be overweight if his or her BMI is between 25.0 - 29.9 kg/m^2.

    - Obese - an individual may be considered to be obese if his or her BMI is greater than or equal to 30.0 kg/m^2.
    - Obesity may be subdivided into the following categories: Class 1 (BMI of 30 kg/m^2 to < 35 kg/m^2); Class 2 (BMI of 35 kg/m^2 to < 40 kg/m^2); Class 3 (BMI of 40 kg/m^2 or higher) (note: Class 3 obesity may be categorized as extreme or severe obesity).

- **Tobacco use** - prostate cancer is associated with tobacco use. Health care professionals should note the following: research suggests that individuals who used/smoked tobacco for an extended period of time are more likely than non-smokers to develop prostate cancer and die from prostate cancer.
- **Chemical exposure** - studies suggest that exposure to Agent Orange, a chemical used widely during the Vietnam War, is associated with prostate cancer.
- **Prostatitis** - studies suggest that prostatitis is associated with prostate cancer (note: prostatitis may refer to inflammation of the prostate gland).
- **Sexually transmitted infections (STIs)** - studies suggest that sexually transmitted infections (STIs) are associated with prostate cancer (e.g., chlamydia and gonorrhea) (note: the term sexually transmitted infection [STI] may refer to an infection transmitted through sexual contact).
- **Vasectomy** - studies suggest that vasectomies are associated with prostate cancer (note: the term vasectomy may refer to a surgical procedure that prevents sperm from leaving the male body).

What are the signs/symptoms of prostate cancer?

The signs/symptoms of prostate cancer include the following:

- Difficulty urinating
- Weak urine flow
- Interrupted urine flow
- Urinating frequently

- Trouble completely emptying the bladder
- Pain during urination
- Burning feeling during urination
- Blood in the urine
- Blood in the semen
- Pain in the back, hips, or pelvis
- Painful ejaculation

How may patients present with symptoms of prostate cancer?

Patients may present with a variety of prostate cancer symptoms (e.g., difficulty with urinating; weak urine flow; blood in the urine). Also, patients may use different language or wording to describe their symptoms or state. When evaluating patients for prostate cancer, health care professionals should note any patient language that may describe symptoms of prostate cancer. Examples of the type of language/wording patients may use to describe their symptoms may be found below.

- I can't urinate.
- I can't go to the bathroom.
- I have to go to the bathroom a lot.
- I am urinating a lot more often.
- I am urinating a lot more.
- I seem to be going to the bathroom a lot.
- I am urinating often.
- I have a weak flow.
- I cannot urinate in the same way.
- I notice a difference when I go to the bathroom.

- My urine flow seems odd.
- My urine flow seems weird.
- It burns when I urinate.
- I have an odd sensation when I urinate.
- I feel something weird when I urinate.
- It burns when I go to the bathroom.
- I have blood in my urine.
- My urine is discolored.
- My urine is an odd color.
- My urine is a weird color.
- It hurts when I have an erection.
- It hurts when I have sex.
- My back hurts.
- I have back pain.
- I have hip pain.
- I have pelvic pain.
- My hips hurt.
- My hips feel uncomfortable.

What are the American Cancer Society's (ACS) recommendations for prostate cancer early detection?

- The American Cancer Society (ACS) recommends that men should have a chance to make an informed decision with health care professionals about whether to be screened for prostate cancer; men should receive information about prostate

cancer before they make a decision regarding prostate cancer screening (e.g., information about prostate cancer risk factors) (American Cancer Society, 2021).

- The ACS recommends that a discussion about prostate cancer screening should take place at age 50 for men who are at average risk of prostate cancer and are expected to live at least 10 more years (American Cancer Society, 2021).
- The ACS recommends that the discussion about prostate cancer screening should take place at age 45 for men at high risk of developing prostate cancer, which includes African American men and men who have a first-degree relative (e.g., father or brother) diagnosed with prostate cancer at an early age (e.g., younger than age 65) (American Cancer Society, 2021).
- The ACS recommends that the discussion about prostate cancer screening should take place at age 40 for men at an even higher risk (e.g., those men with more than one first-degree relative who had prostate cancer at an early age) (American Cancer Society, 2021).

What are the screening tests for prostate cancer?

The screening tests for prostate cancer include the prostate-specific antigen (PSA) blood test and the digital rectal exam (DRE). Specific information regarding the aforementioned screening tests for prostate cancer may be found below. The information found below was derived from materials provided by the American Cancer Society unless, otherwise, specified (American Cancer Society, 2021).

- The prostate-specific antigen (PSA) blood test may refer to a blood test that is used to measure the level of PSA in a sample of blood.
- Prostate-specific antigen (PSA) may refer to a protein that is made by cells in the prostate gland.
- PSA may be in semen and blood.
- PSA levels are normally higher in older men when compared to younger men.
- The PSA level in blood is measured in units called nanograms per milliliter (ng/mL); the chance of having prostate cancer goes up as the PSA level goes up; for example, a man with a PSA level of 4 ng/mL has a higher risk of prostate cancer when compared to a man with a PSA level of 2 ng/mL.

- Most men without prostate cancer have PSA levels under 4 ng/mL; a PSA level over 4 ng/mL may indicate prostate cancer.
- Factors that may increase PSA levels include the following: age, an enlarged prostate, prostatitis, ejaculation, and medications.
- The PSA level from a screening test may be referred to as total PSA; total PSA may refer to the total amount of PSA in the blood, which includes the amount of free PSA and the amount of PSA attached to other proteins.
- A complexed PSA test may be used in prostate cancer screening; a complexed PSA test may refer to a test that measures the amount of PSA that is attached to other proteins.
- A prostate health index (PHI) may be used in prostate cancer screening; a prostate health index (PHI) may refer to a blood test that helps determine the probability of detecting prostate cancer with a biopsy (note: the term biopsy may refer to a procedure that is used to remove a piece of tissue or a sample for testing).
- Health care professionals should note that blood PSA levels can vary over time; therefore some health care professionals recommend repeating the test after 30 days if the initial PSA result is abnormal.
- Digital rectal exam (DRE) may refer to an internal examination of the rectum and prostate.
- During a DRE, a health care professional typically inserts a gloved, lubricated finger into the patient's rectum to feel for any bumps or hard areas on the prostate that may be cancer.
- Health care professionals should note that prostate cancer typically begins in the back part of the prostate, and may be felt during a DRE.

What should health care professionals consider when screening patients for prostate cancer?

- **Hand hygiene** - hand hygiene may refer to a process of cleaning the hands in order to prevent contamination and/or the spread of infectious agents (e.g., viruses). Hand hygiene should be performed at the following key moments: when

the hands are visibly soiled; after barehanded touching of instruments, equipment, materials, and other objects likely to be contaminated by blood, saliva, or respiratory secretions; before and after treating each patient; before donning personal protective equipment (PPE); immediately after removing all PEE (note: the term personal protective equipment [PPE] may refer to equipment designed to protect, shield, and minimize exposure to hazards that may cause serious injury, illness, and/or disease) (CDC, 2021).

- **Donning Personal Protective Equipment (PPE)** - personal protective equipment (PPE) may refer to equipment designed to protect, shield, and minimize exposure to hazards that may cause serious injury, illness, and/or disease (CDC, 2021). When donning PPE, health care professionals should, first, engage in hand hygiene, and then don PPE, as required (note: when donning/wearing gloves, health care professionals should avoid touch contamination; touch contamination may refer to touching one's self and/or other surfaces such as tables, light switches, and doors while wearing gloves; touch contamination may lead to contamination and/or the passing of potentially infectious materials to health care professionals and patients) (CDC, 2021). When removing PPE, health care professionals should remove PPE as required, and then engage in hand hygiene after removing all PPE (CDC, 2021).

- **Work to prevent the transmission of influenza viruses** - influenza (flu) may refer to a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and the lungs. Health care professionals can work to prevent the transmission of influenza viruses by the following means: practicing effective hand hygiene; donning PPE, when appropriate; employing respiratory hygiene and cough etiquette measures; ensuring the safe handling of potentially contaminated equipment and surfaces in the patient environment; and by following safe injection practices.

- **Work to prevent the transmission of the virus that cause COVID-19** - coronavirus disease 2019 (COVID-19) may refer to a respiratory illness that can spread from person to person, which is caused by a virus known as the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Health care professionals can work to prevent the transmission of COVID-19 by the following means: practicing effective hand hygiene; donning PPE, when appropriate; employing respiratory hygiene and cough etiquette measures; ensuring the safe handling of potentially

contaminated equipment and surfaces in the patient environment; and by following safe injection practices.

- **Stress** - for some patients, prostate cancer screening may be stressful. Therefore, health care professionals should work to limit patient stress. Health care professionals should note the following: stress may refer to a factor that causes emotional, physical, or psychological tension; stress may arise from a significant life event (e.g., prostate cancer); stress may lead to: headaches, high blood pressure, heart disease, diabetes, skin conditions, asthma, arthritis, depression, anxiety, and substance abuse. Health care professionals should note the following signs/symptoms of stress: disbelief and shock; tension and irritability; fear and anxiety about the future; difficulty making decisions; feeling numb; sadness and other symptoms of depression; loss of interest in normal activities; loss of appetite; nightmares and recurring thoughts about an event; anger; increased use of alcohol and drugs; feeling powerless; crying; sleep problems; headaches; back pains; stomach problems; trouble concentrating.

- **Grief** - in addition to stress, some patients may experience grief. Health care professionals should note the following: grief may refer to deep sorrow and/or distress that is caused by a traumatic event (e.g., prostate cancer); grief is the normal response of sorrow, heartache, and confusion; grief is different for every individual; typical grief reactions include the following: shock, disbelief, or denial; anxiety; distress; anger; periods of depression; loss of sleep; loss of appetite. Health care professionals should note the following signs/symptoms of grief: feeling angry; being unable to concentrate or focus; nightmares or intrusive thoughts; feeling deep loneliness; feeling distrustful of others; feeling unable to maintain regular activities or fulfill responsibilities; feeling bitterness about life.

- **Trauma** - in addition to stress and grief, some patients may experience trauma. Health care professionals should note the following: trauma may refer to an emotional response to an event and/or a traumatic event; a traumatic event may refer to an event, or series of events, that causes a moderate to severe stress reaction; trauma may lead to distress, shock, and denial. Health care professionals should note the following signs/symptoms of trauma: mood swings, flashbacks, and social isolation (note: the term social isolation may refer to a lack of social connections that may impact an individual's health and quality of life).

- **Mental health conditions** - prostate cancer screening may act as a trigger for depression, anxiety, or other mental health conditions, such as post-traumatic stress disorder (PTSD) (note: the term mental health condition may refer to a condition that affects mood, thinking, behavior, and daily functioning). Therefore, health care professionals should be aware of patients' mental health conditions, when applicable. Health care professionals should ensure such conditions are adequately managed, and that patients have access to a means of support, when needed. Health care professionals should also ensure patient medication adherence, when applicable; patient medication adherence is often essential to mental health condition management (note: the term patient medication adherence may refer to how a patient adheres to prescribed medications [e.g., does a patient take his or her medications as prescribed by a health care professional; does a patient take his or her medications]).

- **Physical health conditions** - along with mental health conditions, health care professionals should ensure physical health conditions are adequately managed (note: the term physical health condition may refer to any condition that leads to dysfunction of, or injury to, the human body). Health care professionals should also ensure patient medication adherence to medications prescribed to manage physical health conditions.

- **Health care documentation** - when screening patients for prostate cancer, health care professionals should document required and relevant patient information. Health care professionals should note that health care documentation may refer to a digital or an analog record detailing the administration of health care to patients.

How is prostate cancer diagnosed?

- Prostate cancer is diagnosed by a health care professional, and typically occurs after prostate cancer screening.

- A prostate biopsy is often utilized when diagnosing prostate cancer. Health care professionals should note the following: a prostate biopsy may lead to a false-negative result; a false-negative result, when used in the context of a prostate biopsy, may refer to a biopsy result that is negative for cancer when cancer may be present.

- A health care professional may determine a Gleason score during the prostate cancer diagnostic process; the Gleason score indicates how likely the cancer is to spread; the Gleason score ranges from two to 10; the lower the Gleason score, the less likely it is that the cancer will spread.

- In addition to a prostate biopsy, health care professionals may use transrectal ultrasound or magnetic resonance imaging (MRI) in the prostate cancer diagnostic process; during a transrectal ultrasound, a probe is inserted into the rectum and high-energy sound waves (ultrasound) are bounced off the prostate to create a picture of the prostate called a sonogram, which can help health care professionals diagnose prostate cancer; a MRI uses magnets and radio waves to produce images on a computer, which can also help health care professionals diagnose prostate cancer.

How is prostate cancer staged?

- Prostate cancer is progressive - meaning it grows, spreads, and/or becomes more destructive to the body over time. Due to the progressive nature of prostate cancer, it is classified into stages. The term stages or stage, when applied to cancer, is used to describe the state of cancer progression upon examination. In other words, the term stage is used to describe how much cancer is in the body, and the location of the cancer in the body when examined. With that in mind, specific information regarding the stages of prostate cancer may be found below. The information found below was derived from materials provided by the American Cancer Society (American Cancer Society, 2021).

- The staging system most often used for colorectal cancer is the American Joint Committee on Cancer (AJCC) TNM system (note: the **T** in **T**NM stands for tumor; the **N** in T**N**M stands for nodes; the **M** in TN**M** stands for metastasis; the term metastasis may refer to the spread of cancer from the initial or primary site).

- The **TNM** system is based on the following three key elements: the extent (size) of the **T**umor**;** the spread to nearby lymph **N**odes (e.g., has the cancer spread to nearby lymph nodes); the **M**etastasis to distant sites (e.g., has the cancer spread to distant lymph nodes or distant organs, such as the liver).

- The main stages of prostate cancer range from I - IV. Health care professionals should note the following: the earliest stage prostate cancers are called stage I;

the lower the stage number means the less the cancer has spread; the higher the stage number (e.g., stage IV) means the cancer spread more than a lower stage number (e.g., stage I); within a stage, an earlier letter (e.g., A) means a lower stage.

- Stage I - a health care professional cannot feel the tumor or see it with an imaging test, such as transrectal ultrasound; the cancer did not spread to nearby lymph nodes [N0] or elsewhere in the body [M0]; the Grade Group is 1, and the PSA level is less than 10; OR the tumor can be felt by digital rectal exam or seen with imaging such as transrectal ultrasound and is in one half or less of only one side (left or right) of the prostate [cT2a]; the cancer did not spread to nearby lymph nodes [N0] or elsewhere in the body [M0]; the Grade Group is 1, and the PSA level is less than 10; OR the prostate was removed with surgery, and the tumor is still only in the prostate [pT2]; the cancer did not spread to nearby lymph nodes [N0] or elsewhere in the body [M0]; the Grade Group is 1, and the PSA level is less than 10.

- Stage IIA - a health professional cannot feel the tumor or see it with imaging such as transrectal ultrasound [cT1]; the cancer did not spread to nearby lymph nodes [N0] or elsewhere in the body [M0]; the Grade Group is 1; the PSA level is at least 10 but less than 20; OR the tumor can be felt by digital rectal exam or seen with imaging such as transrectal ultrasound and is in one half or less of only one side (left or right) of the prostate [cT2a]; OR the prostate was removed with surgery, and the tumor was still only in the prostate [pT2]; the cancer did not spread to nearby lymph nodes [N0] or elsewhere in the body [M0]: the Grade Group is 1; the PSA level is at least 10 but less than 20; OR the tumor can be felt by digital rectal exam or seen with imaging such as transrectal ultrasound; it is in more than half of one side of the prostate [cT2b] or it is in both sides of the prostate [cT2c]; the cancer did spread to nearby lymph nodes [N0] or elsewhere in the body [M0]; the Grade Group is 1; the PSA level is less than 20.

- Stage IIB - the cancer did not spread outside of the prostate; it might (or might not) be felt by digital rectal exam or seen with imaging such as transrectal ultrasound [T1 or T2]; the cancer did not spread to nearby lymph nodes [N0] or elsewhere in the body [M0]; the Grade Group is 2; the PSA level is less than 20.

- Stage IIC - the cancer did not spread outside of the prostate; it might (or might not) be felt by digital rectal exam or seen with imaging such as transrectal

ultrasound [T1 or T2]; the cancer did not spread to nearby lymph nodes [N0] or elsewhere in the body [M0]; the Grade Group is 3 or 4; the PSA level is less than 20.

- Stage IIIA - the cancer did not spread outside of the prostate; it might (or might not) be felt by digital rectal exam or seen with imaging such as transrectal ultrasound [T1 or T2]; the cancer did not spread to nearby lymph nodes [N0] or elsewhere in the body [M0]; the Grade Group is 1 to 4; the PSA level is at least 20.

- Stage IIIB - the cancer grew outside of the prostate and might have spread to the seminal vesicles [T3], or it spread into other tissues next to the prostate, such as the urethral sphincter (muscle that helps control urination), rectum, bladder, and/or the wall of the pelvis [T4]; it did not spread to nearby lymph nodes [N0] or elsewhere in the body [M0]; the Grade Group is 1 to 4, and the PSA can be any value.

- Stage IIIC - the cancer might or might not be growing outside of the prostate and into nearby tissues [any T]; it did not spread to nearby lymph nodes [N0] or elsewhere in the body [M0]; the Grade Group is 5; the PSA can be any value.

- Stage IVA - the tumor might or might not be growing into tissues near the prostate [any T]; the cancer spread to nearby lymph nodes [N1] but did not spread elsewhere in the body [M0]; the Grade Group can be any value, and the PSA can be any value.

- Stage IVB - the cancer might or might not be growing into tissues near the prostate [any T] and might or might not have spread to nearby lymph nodes [any N]; it spread to other parts of the body, such as distant lymph nodes, bones, or other organs [M1]; the Grade Group can be any value, and the PSA can be any value.

Section 1 Summary

Prostate cancer may refer to a type of cancer that is characterized by abnormal cell growth in the prostate, which is a small gland in men that helps produce semen. The risk factors for prostate cancer include the following: age, race/ethnicity, family history, gene changes, Lynch syndrome, geography, diet, a lack of physical activity, obesity, tobacco use, chemical exposure, prostatitis, STIs, and having a vasectomy. Prostate cancer

screening is recommended to detect prostate cancer early on. Health care professionals should discuss prostate cancer screening with patients, when applicable.

Section 1 Key Concepts

- All men are at risk for prostate cancer.
- The most common risk factor for prostate cancer is age.
- African American men and Caribbean men are at increased risk for prostate cancer.
- The ACS recommends that men should have a chance to make an informed decision with their health care professional about whether to be screened for prostate cancer; men should receive information about prostate cancer before they make a decision regarding prostate cancer screening.
- The screening tests for prostate cancer include the PSA blood test and the DRE.
- Prostate cancer is progressive - meaning it grows, spreads, and/or becomes more destructive to the body over time; due to the progressive nature of prostate cancer, it is classified into stages.
- The main stages of prostate cancer range from I - IV.

Section 1 Key Terms

Prostate cancer - a type of cancer that is characterized by abnormal cell growth in the prostate, which is a small gland in men that helps produce semen

Cancer - a disease characterized by abnormal cell growth

Urethra - the tube that empties urine from the bladder

Physical activity - any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above a basal level (U.S. Department of Health and Human Services, 2018)

Sedentary lifestyle - an inactive lifestyle characterized by extended periods of sitting or laying down, with little to no physical activity

Obesity - a condition characterized by abnormal or excessive fat accumulation, which may impair health

Body mass index (BMI) - a value derived from an individual's height and weight

Lynch syndrome - an inherited condition that increases the risk of cancer

Prostatitis - inflammation of the prostate gland

Sexually transmitted infection (STI) - an infection transmitted through sexual contact

Vasectomy - a surgical procedure that prevents sperm from leaving the male body

Prostate-specific antigen (PSA) blood test - a blood test that is used to measure the level of PSA in a sample of blood

Prostate-specific antigen (PSA) - a protein that is made by cells in the prostate gland

Total PSA - the total amount of PSA in the blood, which includes the amount of free PSA and the amount of PSA attached to other proteins

Complexed PSA test - a test that measures the amount of PSA that is attached to other proteins

Prostate health index (PHI) - a blood test that helps determine the probability of detecting prostate cancer with a biopsy

Biopsy - a procedure that is used to remove a piece of tissue or a sample for testing

Digital rectal exam (DRE) - an internal examination of the rectum and prostate

Hand hygiene - the process of cleaning hands in order to prevent contamination and/or infections

Personal protective equipment (PPE) - equipment designed to protect, shield, and minimize exposure to hazards that may cause serious injury, illness, and/or disease

Touch contamination - touching one's self and/or other surfaces such as tables, light switches, and doors while wearing gloves

Influenza (flu) - a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and the lungs

Coronavirus disease 2019 (COVID-19) - a respiratory illness that can spread from person to person, which is caused by a virus known as the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)

Stress - a factor that causes emotional, physical, or psychological tension

Grief - deep sorrow and/or distress that is caused by a traumatic event

Trauma - an emotional response to an event and/or a traumatic event

Traumatic event - an event, or series of events, that causes a moderate to severe stress reaction

Social isolation - a lack of social connections that may impact an individual's health and quality of life

Mental health condition - a condition that affects mood, thinking, behavior, and daily functioning

Patient medication adherence - how a patient adheres to prescribed medications

Physical health conditions - any condition that leads to dysfunction of, or injury to, the human body

Health care documentation - a digital or an analog record detailing the administration of health care to patients

False-negative result (when used in the context of a biopsy) - a biopsy result that is negative for cancer when cancer may be present

Stage (when applied to cancer) - the state of cancer progression upon examination

Metastasis - the spread of cancer from the initial or primary site

Section 1 Personal Reflection Question

Why is it important for health care professionals to discuss prostate cancer screening with patients?

Section 2: Prostate Cancer Prevention and Treatment

This section of the course will focus on methods that may be used to both prevent and treat prostate cancer. The information found within this section was derived from materials provided by the CDC unless, otherwise, specified (CDC, 2022).

Prostate Cancer Prevention

- **Diet** - diet, or more specifically a diet high in dairy products, is a risk factor for prostate cancer. Therefore, diet modifications may help prevent prostate cancer. Prostate cancer patients should receive diet recommendations, when applicable. Health care professionals should note the following diet recommendations: from 12 months through older adulthood, individuals should follow a healthy dietary pattern across their lifespan to meet nutrient needs, help achieve a healthy body weight, and reduce the risk of chronic disease; individuals should focus on meeting food group needs with nutrient-dense foods and beverages, and stay within calorie limits - nutrient-dense foods provide vitamins, minerals, and other health-promoting components and have little to no added sugars, saturated fat, and sodium; a healthy dietary pattern consists of nutrient-dense forms of foods and beverages across all food groups, in recommended amounts, and within calorie limits; individuals interested in limiting dairy intake should consider lactose-free products and fortified soy beverages (U.S. Department of Health and Human Services, 2020).

- **Physical activity** - a lack of physical activity and obesity are risk factors for prostate cancer. Therefore, physical activity may help prevent prostate cancer. Prostate cancer patients should receive physical activity recommendations, when applicable. Health care professionals should note the following physical activity recommendations: adults should move more and sit less throughout the day; some physical activity is better than none; adults who sit less and do any amount of moderate-to-vigorous physical activity gain some health benefits; for substantial health benefits, adults should do at least 150 minutes (2 hours and 30 minutes) to 300 minutes (5 hours) a week of moderate-intensity, or 75 minutes (1 hour and 15 minutes) to 150 minutes (2 hours and 30 minutes) a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity; preferably, aerobic activity

should be spread throughout the week (U.S. Department of Health and Human Services, 2018).

- **Promoting weight loss** - as previously mentioned, obesity is a risk factor for prostate cancer. Therefore, weight loss may help prevent prostate cancer. Prostate cancer patients should receive weight loss recommendations, when applicable. Health care professionals should note the weight loss recommendations found below.

    - Individuals should note that the first step to losing weight is to commit to losing weight.

    - Individuals should evaluate their height, weight, and any weight-related risk factors.

    - Individuals should focus on gradual and steady weight loss (e.g., approximately one to two pounds per week).

    - Individuals should initially focus on modest weight loss (e.g., 5% to 10% of total body weight) (note: modest weight loss may lead to health benefits, such as: improvements in blood pressure, blood cholesterol, and blood sugars).

    - Individuals should identify sources for weight loss support.

    - Individuals attempting to lose weight should seek support from family and friends, when applicable (note: individuals who successfully lose weight and keep it off typically rely on support from others to help maintain motivation, a healthier lifestyle, and continued weight loss).

    - Individuals attempting to lose weight should consider taking part in support groups (note: the term support group may refer to a group of people, led by a health care professional, that attempt to help each other through sharing, encouragement, comfort, and advice; support groups can help patients suffering from obesity make connections with other individuals who can help them maintain motivation, a healthier lifestyle, and continued weight loss/healthy weight management; support groups can help patients suffering from obesity avoid some of the complications associated with obesity such as: low self-esteem, relationship problems,

social isolation, and suicidal ideation; suicidal ideation may refer to thoughts of suicide and/or thoughts of planning suicide).

- Individuals attempting to lose weight should consider engaging in regular physical activity.
- Individuals attempting to lose weight should consider portion control (note: the term portion control may refer to a method of moderating an individual's diet by determining the number of calories in each serving of food; portion control can help individuals take an active role in their weight loss; portion control may be most beneficial to patients who are highly motivated to lose weight).
- Individuals attempting to lose weight should consider self-monitoring weight (note: the term self-monitor, as it relates to weight loss and maintenance, may refer to the act of observing and recording aspects of behavior related to weight, weight loss, and weight maintenance [e.g., calorie intake per day]).

- **Tobacco cessation** - tobacco use is a risk factor for prostate cancer. Therefore, tobacco cessation may help prevent prostate cancer. Prostate cancer patients should engage in tobacco cessation, when applicable. Specific information regarding tobacco cessation may be found below.
  - Tobacco cessation may refer to the process of discontinuing or stopping tobacco smoking or use.
  - Nicotine is the addictive substance in tobacco.
  - Individuals should note that the first step to stopping tobacco use is to commit to stopping tobacco use.
  - When presented with a patient, health care professionals should consider the five **A**s of tobacco cessation, which include: **A**sk, **A**dvise, **A**ssess, **A**ssist, and **A**rrange.
  - **A**sk - health care professionals should **A**sk every patient about tobacco use.

- **A**dvise - health care professionals should advise every patient, who uses tobacco, to quit.

- **A**ssess - health care professionals should **A**ssess the following: a patient's willingness to make a quit attempt within 30 days; determine where each patient is in terms of his or her readiness to quit tobacco use; past quit attempts.

- **A**ssist - when a patient arrives at the decision to stop tobacco use and commits to tobacco cessation, health care professionals should **A**ssist the patient with his or her tobacco cessation plan.

- **A**rrange - health care professionals should **A**rrange a patient follow up appointment to evaluate/further assist with the patients' tobacco cessation.

- When applying tobacco cessation services to patient care, health care professionals should remember that tobacco cessation is a process that could take weeks, months, or even years to complete.

- When applying tobacco cessation services to patient care, health care professionals should consider the four major points of tobacco cessation, which include: resist any desire to force tobacco cessation on patients; obtain insight into why a patient wants to quit smoking; listen to patients as they express themselves about tobacco use and tobacco cession; motivate and empower patients to quit smoking when they are ready and committed to quitting.

- When applying tobacco cessation services to patient care, health care professionals should consider providing patients with relevant recommendations such as the following: reflect on reasons to stop using tobacco; determine a "stop date" (i.e., select a specific day to stop using tobacco products); dispose of all personal tobacco products; identify specific individuals that may provide support; adopt a method to reduce cravings (e.g., chew gum; drink water; engage in physical activity); take part in engaging activities (e.g., yoga); avoid triggers that may potentiate tobacco use (e.g., going to a bar).

- **Treat sexually transmitted infections (STIs)** - STIs are a risk factor for prostate cancer. Therefore, STIs should be treated, when applicable. Prostate cancer patients should also be screened for STIs, when applicable. Specific recommendations regarding STI screening may be found below.

    - Screening men who have sex with women for chlamydia - men should be screened for chlamydia.

    - Screening men who have sex with men for chlamydia - men who have sex with men should be screened for chlamydia annually; high risk men who have sex with men (e.g., men having sex with multiple partners) should be screened every three to six months.

    - Screening transgender and gender diverse individuals for chlamydia - transgender and gender diverse individuals should be screened for chlamydia, at least, annually (note: more frequent screening might be appropriate depending on individual risk behaviors [e.g., having sex with multiple partners]).

    - Individuals with HIV - individuals with HIV should be screened for chlamydia during the first HIV evaluation, and at least annually thereafter (note: more frequent screening might be appropriate depending on individual risk behaviors [e.g., having sex with multiple partners]).

    - Screening men who have sex with women for gonorrhea - men and young men should be screened for gonorrhea.

    - Screening men who have sex with men for gonorrhea - men who have sex with men should be screened for gonorrhea annually; high risk men who have sex with men (e.g., men having sex with multiple partners) should be screened every three to six months.

    - Screening transgender and gender diverse individuals for gonorrhea - transgender and gender diverse individuals should be screened for gonorrhea, at least, annually (note: more frequent screening might be appropriate depending on individual risk behaviors [e.g., having sex with multiple partners; engaging in sex work]).

    - Individuals with HIV - individuals with HIV should be screened for gonorrhea during the first HIV evaluation, and at least annually thereafter

(note: more frequent screening might be appropriate depending on individual risk behaviors [e.g., having sex with multiple partners; engaging in sex work]).

- Screening men who have sex with women for syphilis - high risk men should be screened for syphilis (e.g., having sex with multiple partners; engaging in sex work).

- Screening men who have sex with men for syphilis - men who have sex with men should be screened for syphilis annually; high risk men who have sex with men (e.g., men having sex with multiple partners; men engaging in sex work) should be screened every three to six months.

- Screening transgender and gender diverse individuals for syphilis - transgender and gender diverse individuals should be screened for syphilis, at least, annually (note: more frequent screening might be appropriate depending on individual risk behaviors [e.g., having sex with multiple partners]).

- Individuals with HIV - individuals with HIV should be screened for syphilis during the first HIV evaluation, and at least annually thereafter (note: more frequent screening might be appropriate depending on individual risk behaviors [e.g., having sex with multiple partners; engaging in sex work]).

- Screening men who have sex with women for herpes - type-specific testing should be considered for men presenting for a STI evaluation, and high risk men presenting for a STI evaluation (e.g., men having sex with multiple partners; men engaging in sex work).

- Screening men who have sex with men for herpes - type-specific testing should be considered for individuals presenting for a STI evaluation, especially high risk men who have sex with men (e.g., men having sex with multiple partners; men engaging in sex work).

- Screening transgender and gender diverse individuals for herpes - type-specific testing should be considered for individuals presenting for a STI evaluation.

- Individuals with HIV - type-specific testing should be considered for individuals presenting for a STI evaluation, especially high risk individuals (e.g., men having sex with multiple partners; men engaging in sex work).

Prostate Cancer Treatment

- **Expectant management** - if a health care professional believes a patient's prostate cancer is unlikely to grow or grow rapidly, he or she may recommend expectant management (note: expectant management may refer to the process of closely monitoring a patient for signs and symptoms of disease progression). Health care professionals should note the following: expectant management may involve active surveillance; active surveillance, when applied to prostate cancer, may refer to the process of closely monitoring prostate cancer via prostate-specific antigen blood tests and prostate biopsies.

- **Prostatectomy** -prostatectomy may refer to an operation characterized by the removal of the prostate. Health care professionals should note the following: some patients may require a radical prostatectomy; a radical prostatectomy may refer to an operation characterized by the removal of the prostate and the surrounding tissue.

- **Radiation therapy** - radiation therapy may refer to the process of using high-energy rays to destroy cancer. Health care professionals should note the following types of radiation therapy: external radiation therapy, which is a type of radiation therapy characterized by the use of a machine outside of the patient's body that directs radiation at the cancer cells; internal radiation therapy, which is a type of radiation therapy characterized by the use of radioactive seeds or pellets, which are placed into or near the cancer to destroy cancer cells.

- **Cryotherapy** - cryotherapy may refer to the use of extremely cold temperatures to freeze and destroy prostate cancer cells and, typically, most of the prostate (American Cancer Society, 2019). Health care professionals should note the following: cryotherapy may be used to treat men with low risk, early-stage prostate cancer; cryotherapy may be used to treat men who cannot have surgery or radiation therapy; cryotherapy is associated with the following adverse events: swelling of the penis; swelling of the scrotum; blood in the urine; pain (American Cancer Society, 2019).

- **Hormone therapy** - hormone therapy may refer to a type of treatment that reduces androgens in the body (American Cancer Society, 2022). Health care professionals should note that following: luteinizing hormone-releasing hormone (LHRH) agonists may be used during hormone therapy; hormone therapy is associated with the following adverse events: reduced sexual desire, weight gain, fatigue, loss of muscle mass, anemia, and depression (American Cancer Society, 2022).

- **Immunotherapy** - immunotherapy may refer to a type of therapy that uses medications to stimulate a patient's immune system to effectively destroy cancer cells (American Cancer Society, 2019). Health care professionals should note the following: pembrolizumab (Keytruda) may be used in immunotherapy; pembrolizumab (Keytruda) is typically administered by intravenous (IV) infusion every two or three weeks; pembrolizumab (Keytruda) is associated with the following adverse events: fatigue, nausea, cough, itching, skin rash, decreased appetite, joint pain, and diarrhea (American Cancer Society, 2019).

- **Poly (ADP-ribose) polymerase (PARP) inhibitors** - poly (ADP-ribose) polymerase (PARP) inhibitors are a type of targeted therapy that may be used to treat prostate cancer. Health care professionals should note the following: rucaparib (Rubraca) and olaparib (Lynparza) are examples of PARP inhibitors; rucaparib (Rubraca) and olaparib (Lynparza) are typically administered by mouth twice a day; PARP inhibitors are associated with the following adverse events: nausea, vomiting, diarrhea, fatigue, loss of appetite, anemia, constipation, skin rash, low blood platelet counts, cough, and shortness of breath (American Cancer Society, 2020).

- **Chemotherapy** - chemotherapy is often used to treat prostate cancer when it spreads outside of the prostate gland (American Cancer Society, 2019). Health care professionals should note the following: docetaxel and cabazitaxel may be used to treat prostate cancer; chemotherapy is associated with the following adverse events: hair loss, mouth sores, loss of appetite, nausea, vomiting, diarrhea, infections, low white blood cell counts, low platelet counts, and fatigue (American Cancer Society, 2019).

Section 2 Summary

Prostate cancer can be effectively prevented and treated. Methods that may be used to prevent prostate cancer include the following: diet, physical activity, promoting weight loss, tobacco cessation, and treating STIs. Methods that may be used to treat prostate cancer include the following: expectant management, prostatectomy, radiation therapy, cryotherapy, hormone therapy, immunotherapy, poly (ADP-ribose) polymerase (PARP) inhibitors, and chemotherapy. Finally, health care professionals should work to educate patients on applicable prostate cancer prevention and treatment methods.

Section 2 Key Concepts

- Prostate cancer can be effectively prevented and treated.
- Health care professionals should work to identify safe and effective methods to both prevent and treat prostate cancer for each patient.

Section 2 Key Terms

Support group - a group of people, led by a health care professional, that attempt to help each other through sharing, encouragement, comfort, and advice

Suicidal ideation - thoughts of suicide and/or thoughts of planning suicide

Portion control - a method of moderating an individual's diet by determining the number of calories in each serving of food

Self-monitor (when applied to weight loss and maintenance) - the act of observing and recording aspects of behavior related to weight, weight loss, and weight maintenance

Expectant management - the process of closely monitoring a patient for signs and symptoms of disease progression

Active surveillance (when applied to prostate cancer) - the process of closely monitoring prostate cancer via prostate-specific antigen blood tests and prostate biopsies

Radical prostatectomy - an operation characterized by the removal of the prostate and the surrounding tissue

External radiation therapy - a type of radiation therapy characterized by the use of a machine outside of the patient's body that directs radiation at the cancer cells

Internal radiation therapy - a type of radiation therapy characterized by the use of radioactive seeds or pellets, which are placed into or near the cancer to destroy cancer cells

Cryotherapy - the use of extremely cold temperatures to freeze and destroy prostate cancer cells and, typically, most of the prostate (American Cancer Society, 2019)

Hormone therapy - a type of treatment that reduces androgens in the body (American Cancer Society, 2022)

Section 2 Personal Reflection Question

How can health care professionals effectively educate patients on applicable prostate cancer prevention and treatment methods?

Section 3: Prostate Cancer Case Studies

The case studies at the beginning of the course are presented in this section to review prostate cancer-related concepts. A case study review will follow each case study. The case study reviews include the types of questions health care professionals should ask themselves when considering prostate cancer care. Additionally, reflection questions will be posed, within the case study reviews, to encourage further internal debate and consideration regarding the presented case study and prostate cancer care. The information found within the case studies and case study reviews was derived from materials provided by the CDC unless, otherwise, specified (CDC, 2022).

Case Study 1

A 54-year-old male patient, named Frank, presents to a health care facility with the following signs/symptoms: difficulty urinating, blood in the urine, and back pain. Upon questioning from a health care professional, Frank reports that his "urine flow is weak, and has been for a while." The patient than goes on to report that he was not "too concerned" about his urine flow until he noticed "blood coming out." Frank also reports that he has not "been to a doctor" in "at least five years." A patient examination reveals

that Frank is 5'9'' and 225 pounds. When the patient examination is completed, Frank asks the health care professional questions about cancer. As the health care professional begins to answer Frank's questions, Frank tells the health care professional that talking about cancer makes him feel "stressed out" and "anxious."

Case Study 1 Review

What patient details may be relevant to prostate cancer?

The following patient details may be relevant to prostate cancer: the patient is a 54-year-old male individual; the patient presents to a health care facility with the following signs/symptoms: difficulty urinating, blood in the urine, and back pain; the patient reports that his "urine flow is weak, and has been for a while;" the patient reports that he was not "too concerned" about his urine flow until he noticed "blood coming out;" the patient reports that he has not "been to a doctor" in "at least five years;" the patient is 5'9'' and 225 pounds; the patient asks the health care professional questions about cancer; the patient tells the health care professional that talking about cancer makes him feel "stressed out" and "anxious."

Are there any other patient details that may be relevant to prostate cancer; if so, what are they?

How are each of the aforementioned patient details relevant to prostate cancer?

Each of the previously highlighted patient details may be relevant to prostate cancer. The potential relevance of each patient detail may be found below.

<u>The patient is a 54-year-old male individual</u> - the previous patient detail is relevant because age is a risk factor for prostate cancer. Health care professionals should note the following: the most common risk factor for prostate cancer is age; the chance of developing prostate cancer increases after the age of 50 (American Cancer Society, 2021).

<u>The patient presents to a health care facility with the following signs/symptoms: difficulty urinating, blood in the urine, and back pain</u> - the previous patient details are relevant because they are signs/symptoms of prostate cancer.

The patient reports that his "urine flow is weak, and has been for a while" - the previous patient detail is relevant because it is a sign/symptom of prostate cancer (e.g., weak urine flow).

The patient reports that he was not "too concerned" about his urine flow until he noticed "blood coming out" - the previous patient detail is relevant because it suggests another sign/symptom of prostate cancer (e.g., blood in the urine). Health care professionals should note the following: patients may present with a variety of prostate cancer symptoms; patients may use different language or wording to describe their symptoms or state; when evaluating patients for prostate cancer, health care professionals should note any patient language that may describe symptoms of prostate cancer.

The patient reports that he has not "been to a doctor" in "at least five years" - the previous patient detail is relevant to prostate cancer screening. The patient's comment suggests that he did not undergo prostate cancer screening. When evaluating patients for prostate cancer, health care professionals should attempt to obtain information regarding prostate cancer screening (e.g., did the patient undergo prostate cancer screening). Health care professionals should note the following: the ACS recommends that a discussion about prostate cancer screening should take place at age 50 for men who are at average risk of prostate cancer and are expected to live at least 10 more years (American Cancer Society, 2021).

The patient is 5'9" and 225 pounds - the previous patient detail is relevant to prostate cancer risk factors, specifically obesity. Based on the patient's height and weight, the patient's BMI is approximately 33.2, which indicates the patient is obese. Health care professionals should note that an individual may be considered to be obese when his or her BMI is greater than or equal to 30 kg/m^2. Health care professionals should consider providing weight loss education to patients that are overweight or obese. Health care professionals should also note that weight loss can help prevent prostate cancer.

The patient asks the health care professional questions about cancer - the previous patient detail is relevant to prostate cancer education. Health care professionals should look for opportunities to provide patient education, when applicable.

The patient tells the health care professional that talking about cancer makes him feel "stressed out" and "anxious" - the previous patient detail is relevant to the patient's mental health. Health care professionals should note the following: prostate cancer screening may act as a trigger for depression, anxiety, or other mental health conditions,

such as PTSD; health care professionals should be aware of patients' mental health conditions, when applicable; health care professionals should ensure such conditions are adequately managed, and that patients have access to a means of support, when needed.

What other ways, if any, are the patient details relevant to prostate cancer?

Is it possible that the patient highlighted in Case Study 1 has prostate cancer?

Based on the information presented in Case Study 1, it may be possible that the patient has prostate cancer. However, additional patient information is required before a diagnosis can be made (e.g., the results of a PSA blood test).

How can health care professionals gather additional patient information to help confirm the possible presence of prostate cancer?

Case Study 2

A 51-year-old male patient, named Jim, presents to a health care facility. Jim reports that he noticed blood in his semen. Questioning from a health care professional reveals that Jim believes he has a sexually transmitted infection (STI) because it "burns" when he urinates. Jim also reveals that he had both chlamydia and gonorrhea in the past ten years. Further questioning from a health care professional reveals that Jim "frequently" engages in unprotected sex with both men and women, and "occasionally uses drugs." Jim goes on to say that he is not interested in changing his "lifestyle" because he is "having a great time." Although Jim is slightly concerned because he recently had to "use naloxone" because he "took too many Oxies."

A medication reconciliation reveals that Jim is prescribed both lisinopril and Zoloft - however, Jim notes that he does not take his "medications every day." Further questioning about Jim's medications reveals a history of poor medication adherence. Jim tells the health care professional that he is "not interested" in taking "a lot of medications." Jim also tells the health care professional that he smokes "at least a pack a day." The health care professional asks Jim if he is interested in stopping tobacco use. Jim simply says "no." Jim goes on to say that he "hopes nothing is seriously wrong" with him because he experienced "enough trauma" in his life when his father "died from prostate cancer." Jim then asks the health care professional if he should "take a prostate cancer test."

Case Study 2 Review

What patient details may be relevant to prostate cancer?

The following patient details may be relevant to prostate cancer: the patient is a 51-year-old male individual; the patient reports that he noticed blood in his semen; the patient believes he has a STI because it "burns" when he urinates; the patient reveals that he had both chlamydia and gonorrhea in the past ten years; the patient "frequently" engages in unprotected sex with both men and women; the patient recently had to "use naloxone" because he "took too many Oxies;" a medication reconciliation reveals that the patient is prescribed both lisinopril and Zoloft; the patient notes that he does not take his "medications every day;" the patient reports that he smokes "at least a pack a day;" a health care professional asks the patient if he is interested in stopping tobacco use; the patient says "no" to stopping tobacco use; the patient "hopes nothing is seriously wrong" with him because he experienced "enough trauma" in his life when his father "died from prostate cancer;" the patient asks the health care professional if he should "take a prostate cancer test."

Are there any other patient details that may be relevant to prostate cancer; if so, what are they?

How are each of the aforementioned patient details relevant to prostate cancer?

Each of the previously highlighted patient details may be relevant to prostate cancer. The potential relevance of each patient detail may be found below.

The patient is a 51-year-old male individual - the previous patient detail is relevant because age is a risk factor for prostate cancer.

The patient reports that he noticed blood in his semen - the previous patient detail is relevant because blood in the semen is a sign/symptom of prostate cancer.

The patient believes he has a STI because it "burns" when he urinates - the previous patient detail is relevant because burning upon urination is a sign/symptom of prostate cancer.

The patient reveals that he had both chlamydia and gonorrhea in the past ten years - the previous patient detail is relevant because STIs are a risk factor for prostate cancer.

Health care professionals should note that prostate cancer patients should be screened for STIs, when applicable.

The patient "frequently" engages in unprotected sex with both men and women - the previous patient detail is relevant to STIs. Health care professionals should note the following: men who have sex with men should be screened for chlamydia annually; high risk men who have sex with men (e.g., men having sex with multiple partners) should be screened for chlamydia every three to six months; men who have sex with men should be screened for gonorrhea annually; high risk men who have sex with men (e.g., men having sex with multiple partners) should be screened for gonorrhea every three to six months.

The patient recently had to "use naloxone" because he "took too many Oxies" - the previous patient detail is relevant to the patient's mental and physical health, and may be an indication of an opioid use disorder (OUD) (note: an opioid use disorder [OUD] may refer to a substance use disorder that is characterized by a problematic pattern of opioid use that causes significant impairment or distress). Health care professionals should note the following: an OUD and the use of opioids may lead to an opioid overdose; the signs/symptoms of an opioid overdose include the following: constricted pupils; loss of consciousness; slow, shallow, breathing; choking or gurgling sounds; limp body; pale, blue, or cold skin; naloxone may be used to reverse an overdose from opioids, as well as prevent an opioid overdose-related death; when caring for patients with a history of an opioid overdose, health care professionals should attempt to determine how the opioid overdose occurred. Health care professionals should also note that naloxone may be offered to patients with the following opioid-related risk factors: the patient is taking higher dosages of opioids; the patient has a history of medical conditions, such as chronic obstructive pulmonary disease (COPD) or obstructive sleep apnea; the patient is prescribed benzodiazepines in addition to opioids (e.g., lorazepam); the patient is receiving treatment for OUD (e.g., methadone); the patient has a history of opioid overdose; the patient is using illegal drugs; the patient is an older adult (note: the term older adult may refer to an individual 65 years or older).

A medication reconciliation reveals that the patient is prescribed both lisinopril and Zoloft - the previous patient detail is relevant to the patient's mental and physical health. Health care professionals should consider conducting medication reconciliations to determine patients' medications (note: the term medication reconciliation may refer to a process of comparing the medications an individual is taking [or should be taking] with newly ordered medications) (Joint Commission, 2023). Health care professionals should

note that medication reconciliations can be used to determine if a patient's mental and physical health conditions are adequately managed.

The patient notes that he does not "take his medications every day" - the previous patient detail is relevant to medication adherence. Health care professionals should encourage medication adherence, when applicable.

The patient reports that he smokes "at least a pack a day" - the previous patient detail is relevant because tobacco use is a risk factor for prostate cancer. When presented with a patient, especially a patient who reports tobacco use, health care professionals should consider the five **A**s of tobacco cessation, which include: **A**sk, **A**dvise, **A**ssess, **A**ssist, and **A**rrange.

A health care professional asks the patient if he is interested in stopping tobacco use; the patient says "no" to stopping tobacco use - the previous patient details are relevant to tobacco cessation. Health care professionals should note that the first step to stopping tobacco use is to commit to stopping tobacco use.

The patient "hopes nothing is seriously wrong" with him because he experienced "enough trauma" when his father "died from prostate cancer" - the previous patient detail is relevant because it indicates a risk factor for prostate cancer, specifically family history. Health care professionals should note that men with a first-degree relative (e.g., father, son, or brother) with a history of prostate cancer may be at increased risk for prostate cancer. The previous patient detail may also be relevant due to the mention of trauma. Health care professionals should note that prostate cancer, the process of screening for prostate cancer, and having a family member with a history of prostate care may be traumatic for some patients.

The patient asks the health care professional if he should "take a prostate cancer test" - the previous patient detail is relevant to prostate cancer screening. Health care professionals should look for opportunities to discuss prostate cancer screening, when applicable. Health care professionals should note the following: the ACS recommends that men should have a chance to make an informed decision with health care professionals about whether to be screened for prostate cancer; men should receive information about prostate cancer before they make a decision regarding prostate cancer screening (American Cancer Society, 2021).

What other ways, if any, are the patient details relevant to prostate cancer?

Is it possible that the patient highlighted in Case Study 2 has prostate cancer?

Based on the information presented in Case Study 2, it may be possible that the patient has prostate cancer. However, additional patient information is required before a diagnosis can be made (e.g., the results of a PSA blood test). When obtaining additional patient information, health care professionals should complete effective health care documentation. Health care professionals should note that in order for health care documentation to be considered effective, it must function as a viable form of communication, as well as a means to establish a detailed record of health care administration.

How can health care professionals gather additional patient information to help confirm the possible presence of prostate cancer?

Case Study 3

Arnold, a 49-year-old African American man, reports to a health care facility for a digital rectal exam (DRE). Arnold scheduled the DRE because his brother was recently diagnosed with prostate cancer. Arnold is admittedly nervous about the DRE, and is not sure what is going to happen.

Upon questioning from a health care professional, Arnold reports that his "urine flow is not the same." Further questioning reveals that Arnold's urine flow is weak. Arnold also reports that he is "using the bathroom" more often. Further questioning from a health care professional reveals that Arnold is having problems concentrating, focusing, and is often angry and distressed. Arnold also reports that he lost his appetite, and is not "eating a lot." Additionally, Arnold reports that he is having trouble sleeping. Arnold notes that he goes to sleep at his "normal time," but "wakes up early and cannot fall back to sleep." Arnold tells the health care professional that he is concerned about his "sleep problems," however he is even more concerned about the potential for prostate cancer.

After Arnold uses the bathroom, he undergoes the DRE. The health care professional conducting the DRE notes a hard area on the prostate. Subsequently, the health care professional orders a prostate-specific antigen (PSA) blood test. The PSA blood test indicates a PSA level of 4.5 ng/ml.

Case Study 3 Review

What patient details may be relevant to prostate cancer?

The following patient details may be relevant to prostate cancer: the patient is a 49-year-old African American man; the patient reports to a health care facility for a digital rectal exam (DRE); the patient scheduled the DRE because his brother was recently diagnosed with prostate cancer; the patient reports that his "urine flow is not the same;" the patient reports that his urine flow is weak; the patient reports that he is "using the bathroom" more often; the patient reports he is having problems concentrating, focusing, and is often angry and distressed; the patient reports that he lost his appetite, and is not "eating a lot;" the patient reports that he is having trouble sleeping; the patient reports that he goes to sleep at his "normal time," but "wakes up early and cannot fall back to sleep;" the health care professional who conducts the DRE notes a hard area on the prostate; a PSA blood test indicates a PSA level of 4.5 ng/ml.

Are there any other patient details that may be relevant to prostate cancer; if so, what are they?

How are each of the aforementioned patient details relevant to prostate cancer?

Each of the previously highlighted patient details may be relevant to prostate cancer. The potential relevance of each patient detail may be found below.

The patient is a 49-year-old African American man - the previous patient detail is relevant because race/ethnicity is a risk factor for prostate cancer. Health care professionals should note the following: African American men and Caribbean men are at increased risk for prostate cancer.

The patient reports to a health care facility for a DRE - the previous patient detail is relevant to both prostate cancer screening and, ultimately, prostate cancer diagnosis. Health care professionals should note the following: during a DRE, a health care professional typically inserts a gloved, lubricated finger into the patient's rectum to feel for any bumps or hard areas on the prostate that may be cancer.

The patient scheduled the DRE because his brother was recently diagnosed with prostate cancer - the previous patient detail is relevant because family history is a risk factor for prostate cancer.

The patient reports that his "urine flow is not the same" - the previous patient detail is relevant because it may indicate a sign/symptom of prostate cancer.

The patient reports that his urine flow is weak - the previous patient detail is relevant because a weak urine flow is a sign/symptom of prostate cancer.

The patient reports that he is "using the bathroom" more often - the previous patient detail is relevant because urinating frequently is a sign/symptom of prostate cancer.

The patient reports he is having problems concentrating, focusing, and is often angry and distressed - the previous patient details are relevant because they are signs/symptoms of grief. Health care professionals should note that prostate cancer or having a family member with prostate cancer may lead to grief. Health care professionals should also note the following signs/symptoms of grief: feeling angry; being unable to concentrate or focus; nightmares or intrusive thoughts; feeling deep loneliness; feeling distrustful of others; feeling unable to maintain regular activities or fulfill responsibilities; feeling bitterness about life.

The patient reports that he lost his appetite, and is not "eating a lot" - the previous patient detail is relevant because it is a potential indication of grief. Health care professionals should note that typical grief reactions include the following: shock, disbelief, or denial; anxiety; distress; anger; periods of depression; loss of sleep; loss of appetite.

The patient reports that he is having trouble sleeping - the previous patient detail is relevant because it is another potential indication of grief.

The patient reports that he goes to sleep at his "normal time," but "wakes up early and cannot fall back to sleep" - the previous patient detail is relevant because it is a potential indication that the patient is developing insomnia. Health care professionals should note the following: the stress and grief associated with prostate cancer may lead to sleep disorders, such as insomnia; insomnia may refer to a sleep disorder characterized by a persistent inability to fall asleep or stay asleep; signs/symptoms of insomnia include the following: difficulty falling asleep at night; waking up during the night; waking up too early (e.g., earlier than desired); not feeling well-rested after a night's sleep; daytime tiredness; daytime sleepiness; irritability, depression, and anxiety.

The health care professional who conducts the DRE notes a hard area on the prostate - the previous patient detail is relevant to both prostate cancer screening and, ultimately,

prostate cancer diagnosis. Health care professionals should note that prostate cancer typically begins in the back part of the prostate, and may be felt during a DRE.

A PSA blood test indicates a PSA level of 4.5 ng/ml - the previous patient detail is relevant to both prostate cancer screening and, ultimately, prostate cancer diagnosis. Health care professionals should note that a PSA level over 4 ng/mL may indicate prostate cancer; most men with a PSA level between 4 and 10 have about a one in four chance of having prostate cancer (American Cancer Society, 2021).

Is it possible that the patient highlighted in Case Study 3 has prostate cancer?

Based on the information presented in Case Study 3, it may be possible that the patient has prostate cancer. However, additional patient information is required before a diagnosis can be made. Health care professionals should note that the next step for Arnold may be a prostate biopsy.

How can health care professionals gather additional patient information to help confirm the possible presence of prostate cancer?

Section 3 Summary

Health care professionals should work to identify patients with prostate cancer. Health care professionals should ask patients questions to obtain relevant patient details that may help with prostate diagnosis, and, ultimately, required care. Finally, health care professionals should look for opportunities to provide patient education, and to discuss prostate cancer screening, when applicable.

Section 3 Key Concepts

- Patient exams and interviews may reveal vital information required for prostate cancer diagnosis and care.

Section 3 Key Terms

Opioid use disorder (OUD) - a substance use disorder that is characterized by a problematic pattern of opioid use that causes significant impairment or distress

Older adult - an individual 65 years or older

Medication reconciliation - a process of comparing the medications an individual is taking (or should be taking) with newly ordered medications (Joint Commission, 2023)

Insomnia - a sleep disorder characterized by a persistent inability to fall asleep or stay asleep

Section 3 Personal Reflection Question

How can health care professionals effectively identify patients with prostate cancer?

Conclusion

Prostate cancer is one of the most common cancers among men. Therefore, health care professionals should work to identify patients potentially suffering from prostate cancer, especially patients with a high risk for prostate cancer. Finally, health care professionals should look for opportunities to provide patient education, and to discuss prostate cancer screening, when applicable.

References

American Cancer Society. (2021, April 23). *American cancer society recommendations for prostate cancer early detection*. https://www.cancer.org/cancer/prostate-cancer/detection-diagnosis-staging/acs-recommendations.html

American Cancer Society. (2019, August 1). *Chemotherapy for prostate cancer*. https://www.cancer.org/cancer/prostate-cancer/treating/chemotherapy.html

American Cancer Society. (2019, August 1). *Cryotherapy for prostate cancer*. https://www.cancer.org/cancer/prostate-cancer/treating/cryosurgery.html

American Cancer Society. (2022, August 9). *Hormone therapy for prostate cancer*. https://www.cancer.org/cancer/prostate-cancer/treating/hormone-therapy.html

American Cancer Society. (2019, August 1). *Immunotherapy for prostate cancer*. https://www.cancer.org/cancer/prostate-cancer/treating/vaccine-treatment.html

American Cancer Society. (2021, October 8). *Prostate cancer stages*. https://www.cancer.org/cancer/prostate-cancer/detection-diagnosis-staging/staging.html

American Cancer Society. (2020, June 9). *Prostate cancer risk factors*. https://www.cancer.org/cancer/prostate-cancer/causes-risks-prevention/risk-factors.html

American Cancer Society. (2021, January 4). *Screening tests for prostate cancer.* https://www.cancer.org/cancer/prostate-cancer/detection-diagnosis-staging/tests.html

American Cancer Society. (2020, June 10). *Targeted therapy for prostate cancer*. https://www.cancer.org/cancer/prostate-cancer/treating/targeted-therapy.html

Centers for Disease Control and Prevention. (2022, August 25). *Basic information about prostate cancer*. https://www.cdc.gov/cancer/prostate/basic_info/

Centers for Disease Control and Prevention. (2023, January 3). *Coping with stress*. https://www.cdc.gov/mentalhealth/stress-coping/cope-with-stress/index.html

Centers for Disease Control and Prevention. (2022, December 5). *COVID-19 treatments and medications*. https://www.cdc.gov/coronavirus/2019-ncov/your-health/treatments-for-severe-illness.html

Centers for Disease Control and Prevention. (2022, June 3). *Defining adult overweight and obesity*. https://www.cdc.gov/obesity/basics/adult-defining.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fobesity%2Fadult%2Findex.html

Centers for Disease Control and Prevention. (2021, January 8). *Healthcare providers*. https://www.cdc.gov/handhygiene/providers/index.html

Centers for Disease Control and Prevention. (2022, August 25). *How is prostate cancer diagnosed*. https://www.cdc.gov/cancer/prostate/basic_info/diagnosis.htm

Centers for Disease Control and Prevention. (2022, August 25). *How is prostate cancer treated*. https://www.cdc.gov/cancer/prostate/basic_info/treatment.htm

Centers for Disease Control and Prevention. (2022, February 28). *How to quit smoking*. https://www.cdc.gov/tobacco/campaign/tips/quit-smoking/index.html

Centers for Disease Control and Prevention. (2022, October 24). *Key facts about influenza (flu)*. https://www.cdc.gov/flu/about/keyfacts.htm

Centers for Disease Control and Prevention. (2022, December 14). *Key sleep disorders*. https://www.cdc.gov/sleep/about_sleep/key_disorders.html

Centers for Disease Control and Prevention. (2022, September 19). *Losing weight*. https://www.cdc.gov/healthyweight/losing_weight/index.html

Centers for Disease Control and Prevention. (2022, June 3). *Losing weight*: *getting started*. https://www.cdc.gov/healthyweight/losing_weight/getting_started.html

Centers for Disease Control and Prevention. (2022, August 30). *Opioid use disorder*. https://www.cdc.gov/dotw/opioid-use-disorder/index.html

Centers for Disease Control and Prevention. (2022, June 6). *Screening recommendations and considerations referenced in treatment guidelines and original sources*. https://www.cdc.gov/std/treatment-guidelines/screening-recommendations.htm

Centers for Disease Control and Prevention. (2022, August 25). *What are the symptoms of prostate cancer*. https://www.cdc.gov/cancer/prostate/basic_info/symptoms.htm

Centers for Disease Control and Prevention. (2022). *When to offer naloxone to patients in the emergency department*. https://www.cdc.gov/opioids/naloxone/factsheets/pdf/Naloxone_FactSheet_EmergencyDepartment.pdf

Centers for Disease Control and Prevention. (2022, August 25). *Who is at risk for prostate cancer*. https://www.cdc.gov/cancer/prostate/basic_info/risk_factors.htm

Joint Commission. (2023). *Hospital: 2023 national patient safety goals.* www.jointcommission.org/standards/national-patient-safety-goals/hospital-2020-national-patient-safety-goals/

U.S. Department of Health and Human Services. (2020). *Dietary guidelines for Americans, 2020-2025*. 9th Edition. https://www.dietaryguidelines.gov/sites/default/files/2020-12/Dietary_Guidelines_for_Americans_2020-2025.pdf

U.S. Department of Health and Human Services. (2018). *Physical activity guidelines for Americans*. 2nd edition. https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf