

PROSTATE HEALTH

Prostate Health **PLAYBOOK**

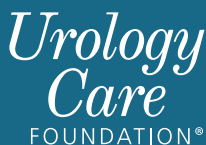


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About the Urology Care Foundation

The Urology Care Foundation is committed to advancing care through medical research, patient resources and global aid. We work with researchers, health care experts, patients and caregivers to improve patients' lives. The Urology Care Foundation is powered by the trusted experts of the American Urological Association (AUA).

Knowledge is power. By reading this Playbook, you've started your game plan for prostate health and well-being. This Playbook is meant for all people with a prostate. It is of great value to know that all people who are born genetically male have a prostate. Any gender can have a prostate and everyone with a prostate should be aware of prostate health. Certain people may be more likely to develop an enlarged prostate or prostate cancer. For instance, African Americans and those with a family member who had prostate cancer have a greater chance of having prostate cancer.

Don't sit on the sidelines. Know your risks and talk to your health care team to see if you should get tested for prostate cancer.

Know Your Risk. Talk to Your Health Care Team.

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Pregame Preparation: What You Should Know About Your Prostate.

Prostate health — much like success in football — depends on key members of your team. In prostate health, the *urologist** is the head coach leading your health care team.

Any football fan or player knows the best offense is a good defense. Learning about your risk for prostate cancer is like learning about your opponent. The more you know, the better you can pick the best plays to stay in the game – for life.

Start by knowing your body. A *prostate* is a walnut-shaped gland that sits under the *bladder*, in front of the *rectum*. It surrounds the *urethra* (the tube that carries *urine* and *semen* out of the body). The prostate's main job is to help make fluid for semen to protect and energize *sperm*.

As you age, your prostate can become larger. It's a normal part of aging for most people with prostates. By the time you reach age 40, your prostate may have gone from the size of a walnut to the size of a golf ball. By the time you reach 60, it might be the size of a lemon. How quickly your prostate grows depends on things that are specific to you, like your age and your genes.

The most common prostate health related problems are non-cancerous. They are an enlarged prostate (*benign prostatic hyperplasia – BPH*) or an infection or inflammation of the prostate (*prostatitis*). People with urinary problems should also talk to their health care team about their prostate health, as they could be a symptom of one of these conditions.

Two tests may be used to check the health of the prostate. They are the *digital rectal exam (DRE)* and a blood test called *prostate-specific antigen (PSA)*.

See page 12 for more about Prostate Cancer Screening.

* All words that appear in italics are explained in the Glossary.

IN PROSTATE HEALTH, THE *UROLOGIST* IS THE HEAD COACH LEADING YOUR HEALTH CARE TEAM.



THERE IS A GAME PLAN FOR PROSTATITIS.



What is Prostatitis?

While prostatitis may put you on the sidelines, it is not life-threatening. Prostatitis is an infection or inflammation of the prostate. Treatments are available once you are diagnosed.

What causes prostatitis?

Prostatitis can be bacterial or nonbacterial. Bacterial prostatitis can be acute or chronic. When it's acute, symptoms can come on suddenly and include fever, chills, urinary changes, ejaculatory pain and pain in the *pelvis* or surrounding areas. Sometimes acute prostatitis may need urgent care if you are unable to empty urine from your bladder. With chronic prostatitis, symptoms are often more gradual and may include pain in the pelvis, urinary symptoms and/or ejaculatory pain. Nonbacterial prostatitis has no signs of bacteria in the urine or semen, and the pain is caused from an inflammation of the prostate from stress, nerve irritation, injuries or past urinary tract infections.

What is the game plan to treat prostatitis?

Your treatment will depend on your symptoms, lab tests and findings during your prostatitis visit to rule out other conditions and to find out what kind of prostatitis you have. Your health care team will ask about your medical history and your symptoms. He or she will also do a physical exam and urine testing.

Treatment is different for each form of prostatitis. If you have bacterial prostatitis, antibiotics are the main course of treatment. Other prostatitis treatment options may include medications to help relax your bladder and relieve such symptoms as pain when passing urine. An anti-inflammatory drug may also be prescribed to make you more comfortable.

For more information about prostatitis, visit UrologyHealth.org/Prostatitis.

Score Your Prostate Symptoms: The American Urological Association (AUA) Symptom Score

Have you noticed any of the following when you have passed urine over the past month? Circle your answer and write your score in the right-hand column. Talk with your health care team if your score is 8 or greater or if you are bothered by your urination.

	Not at all	Less than 1 time in 5	Less than half the time	About half the time	More than half the time	Almost always	Your score
Incomplete emptying — It does not feel like I empty my bladder all the way.	0	1	2	3	4	5	
Frequency — I have to go again less than two hours after I finish urinating.	0	1	2	3	4	5	
Intermittency — I stop and start again several times when I urinate.	0	1	2	3	4	5	
Urgency — It is hard to wait when I have to urinate.	0	1	2	3	4	5	
Weak stream — I have a weak urine stream.	0	1	2	3	4	5	
Straining — I have to push or strain to begin urination.	0	1	2	3	4	5	
	None	1 time	2 times	3 times	4 times	5 times or more	Your score
Nocturia — I get up to pass urine after I go to bed until the time I get up in the morning.	0	1	2	3	4	5	
Total AUA Symptom Score							
Total score: 0–7 mildly symptomatic; 8–19 moderately symptomatic; 20–35 severely symptomatic.							
Quality of life due to urinary symptoms	Delighted	Pleased	Mostly satisfied	Mixed: about equally satisfied and dissatisfied	Mostly dissatisfied	Unhappy	Terrible
If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that?	0	1	2	3	4	5	6

What is an Enlarged Prostate or BPH?

Knowing the size of a golf ball and a baseball can help get your head in the game.

By age 40, a prostate can grow from the size of a walnut to the size of a golf ball and by age 60, it might be the size of a baseball. As the prostate enlarges, it squeezes the urethra. This can cause lower urinary tract symptoms (LUTS) such as weak urine stream, pushing to pass urine or passing urine a lot.

Who is at risk for an enlarged prostate?

An enlarged prostate is also known as Benign Prostatic Hyperplasia (BPH). The biggest known risk factor for an enlarged prostate is aging. Family history (your genes), obesity and high blood sugar may also be risk factors.

How is an enlarged prostate diagnosed?

The American Urological Association's (AUA) Symptom Score, on page 8, allows people to rate their symptoms. This helps your health care team understand what's happening when you pass urine. When you see your specialist, they will take an in-depth health history. They may do a physical and test your urine (a *urinalysis*) and your PSA blood levels. (See page 12 for more on tests.)

When should a person see an expert about enlarged prostate?

If you have any of the symptoms in the AUA Symptom Score, you may want to see a specialist. A specialist in prostate health is a urologist. Pay attention to blood in your urine, pelvic pain, burning when passing urine or if it is not easy for you to pass urine. An enlarged prostate is usually not cancer, but your medical team may still check you for prostate cancer with an exam and a PSA test.

What is the game plan to treat urinary problems or incontinence?

Enlarged prostates and urinary symptoms can get worse with age. Your urinary symptoms might be any of those listed in the AUA symptom score but also may be leaking urine (incontinence). There are different types of incontinence in men and your specialist may do testing to determine if it is stress urinary incontinence (SUI), overactive bladder (OAB) related incontinence or overflow incontinence (the bladder is too full). One way to tackle incontinence or urinary symptoms related to an enlarged prostate is with behavioral changes or prescription drugs. There are also many effective surgeries or in-office procedures that may help treat your symptoms. Your urologist can help you decide what the best game plan is for you, your prostate and your bladder.

For more information on BPH and urinary symptoms, visit UrologyHealth.org/BPH.

PROSTATE CANCER RISK GROWS WITH AGE.



What is Prostate Cancer?

Timeouts can be used to go over the game plan. With prostate health, it is worth taking the time to learn about this cancer that begins in the prostate gland and develops when abnormal cells form and grow.

Who is at risk for prostate cancer?

In football, your age and background can make an impact in the game. With prostate cancer, there are also factors that can impact the game. Your risks for prostate cancer rise if you are older, have a family history of prostate cancer, are African American or have inherited mutations of the BRCA1 or BRCA2 genes. Sometimes where you work can also increase your risk of prostate cancer.

Age matters. Prostate cancer risks increase with age. More than half of all prostate cancer is found in people older than 65. Prostate cancer is rare in those under the age of 40.

Race and ethnicity play a role. People who are African American and those who are Caribbean of African ancestry face a higher risk of having prostate cancer. They are also more likely to be diagnosed with prostate cancer at a younger age. It is not clear why prostate cancer affects African Americans more than other racial/ethnic groups, but it is of great value to be aware of these health differences to know your risk.

Your work may put you at risk for getting prostate cancer. Being exposed to harmful chemicals may put you at risk for certain cancers like prostate cancer. Some special groups may be at higher risk to include those who work in farming, factories, fire and rescue, research labs as well as those who are veterans or in active duty with the military.

Can testing genes help treatment?

Genes count because the risk of prostate cancer more than doubles in those with a family history of prostate cancer including your father, grandfather or your brothers. Having family members with breast and ovarian cancer also raises the risk for prostate cancer because breast, ovarian and prostate cancers share some of the same genes, including BRCA1 and BRCA2. If a person's *genetic testing* results have a variant in any of these genes, they should be screened earlier or more often for prostate cancer.

As a health care tool, gene testing results can help determine whether a certain treatment would be useful. For example, those with an inherited repair variant in the DNA of cancer cells could be helped with a *PARP inhibitor*. To learn more, talk to your health care team about *biomarker*, *genomic*, *germline* and *somatic testing* as these and other new tests may reveal new ways to treat prostate cancer.

Decrease the risk of prostate cancer by striving to eat a diet low in animal fat and high in fruits and vegetables. Your primary goals are eating with health in mind, daily workouts, losing excess weight and quitting smoking.

What is Prostate Cancer Screening?

Different experts have different opinions on when to check for prostate cancer. It is important to tell your health care team your care goals and ask them why they recommend screening (or not screening) for prostate cancer.

When screening or checking for prostate cancer, two tests may be done: the PSA blood test and the optional DRE. When to start screening depends on you. American Urological Association Clinical Guidelines recommend starting screening when you are 45 years old but you may want to start screening earlier depending on your family history or if you have certain medical conditions. It is important to talk to your specialist about whether prostate cancer screening is right for you. If you and your health care team don't agree on screening for prostate cancer, you can choose to see a different health care team.

What is PSA?

PSA is a protein made only by the prostate gland. A lower PSA means a lower prostate cancer risk but a high level of PSA can be a sign of other prostate problems, not just prostate cancer.

What is the PSA test?

This blood test measures the level of PSA in the blood. When screening for prostate cancer, your health care team should use PSA as the first screening test. Keeping your opponent's score low is the name of the game. A low PSA means you are less likely to have prostate cancer. A rapid rise in PSA may be a sign of something wrong. It could be from an enlarged prostate or prostatitis. Prostate cancer is the most serious reason for a high PSA. Talk with your health care team about when you should get the PSA test. Changes in your PSA score over time will be followed by your health care team.

What is the DRE?

DRE is an optional physical test to feel the prostate for problems. During a DRE, the health care team member puts a lubricated gloved finger into the rectum. It is done to feel for any lumps, bumps or an abnormal shape or thickness in the prostate. The DRE can help your health care team find prostate problems. The test doesn't take long and is not painful for most.

For more information about prostate cancer, visit UrologyHealth.org/ProstateCancer.

Testing can help you stay on top of your game.

RISK OF PROSTATE CANCER FOR AFRICAN AMERICANS.



African Americans are more likely to be diagnosed with prostate cancer and at a younger age.
Early screening can help!

RISK OF PROSTATE CANCER FOR THOSE WITH A FAMILY HISTORY.



Having a father, grandfather or brother with prostate cancer more than doubles the risk for prostate cancer.
Early screening can help!

Is Prostate Cancer Screening Right for You?

Good defenses keep teams in games. Screening for prostate cancer may be your best defense. Talk with your health care team about screening if you're 45 or older. People who have a family history of prostate cancer or are African American or Caribbean of African descent may need to be screened earlier.

Should I be screened for prostate cancer?

People with prostates between the ages of 45–69 benefit most from prostate cancer screening and should talk to their health care team about whether PSA testing is right for them. If you are younger than 45, talk to your health care team about prostate cancer screening if you:

- are African American
- are a Caribbean person of African descent
- have a family history of prostate cancer

The choice to be screened for prostate cancer is a personal one. Before you decide to have a PSA test, talk with your health care team about your risk for prostate cancer and the risks and benefits of testing.

Does a high PSA mean I have prostate cancer?

Not necessarily. Less than one-third of high PSA results are caused by prostate cancer. If a PSA is high, your specialist may repeat your PSA or do further blood or urine tests to check the accuracy of the test. Or your health care team may want to follow you over time. If there is concern, you may need a prostate *biopsy*. A prostate biopsy (*tissue* sample) is the only way to know for sure if you have cancer.

How can imaging help screen for prostate cancer?

Imaging can help your health care team learn more about your cancer. Some types of scans used include *MRI*, *CT*, *bone scan* and *PET*.

What are the symptoms of prostate cancer?

In early stages, prostate cancer usually causes no symptoms at all. When symptoms do occur, they are similar to an enlarged prostate or BPH (see Page 9). Late-stage cancer can cause bone pain and may also cause a loss of appetite and/or unwanted weight loss. If you have any of these symptoms, talk to your health care team about your prostate health.

Know Your Risk. Talk to Your Health Care Team.

What are Grading and Staging?

Like the quarters of a football game, prostate cancer is grouped into stages. It's important to understand the different stages as well as grading – that way, you and your specialist can create a solid game plan.

Prostate cancer is grouped into four stages. The stages are defined by how much and how quickly the cancer cells are growing. The stages are defined by the Gleason Score and the T (tumor), N (node), M (metastasis) Score.

Grading

If a biopsy shows cancer, the *pathologist* gives it a grade. The most common grading system is called the Gleason grading system. The Gleason score is a measure of how quickly the cancer cells can grow and affect other tissue. Biopsy samples are taken from the prostate and given a Gleason grade by a pathologist. Lower grades are given to tissue samples that look more normal in appearance and may have small, more closely packed cells. Higher grades are given to samples that look abnormal and may have cancer cells that are spread out. The Gleason score is set by adding together the two most common grades found in a biopsy sample.

The Gleason score will help your health care team understand if the cancer is a low-, intermediate- or high-risk disease. The risk assessment is the risk of recurrence after treatment. Generally, Gleason scores of 6 are treated as low-risk cancers. Gleason scores of around 7 are treated as intermediate/midlevel cancers. Gleason scores of 8 and above are treated as high-risk cancers. Some of these high-risk tumors may have already spread by the time they are found amongst all biopsy samples.

Staging

Tumor, Nodes and Metastasis (TNM) staging system is the system used for tumor staging. The T, N, M Score is a measure of how far the prostate cancer has spread in the body. The T (tumor) score rates the size and extent of the original tumor. The N (nodes) score rates whether the cancer has spread into nearby lymph nodes. The M (metastasis) score rates whether the cancer has spread to distant sites. Tumors found only in the prostate are more successfully treated than those that have metastasized (spread) outside the prostate.

Discuss grading and staging with your health care team to know the best steps in your treatment plan.

GRADING AND STAGING MAY HELP YOUR TREATMENT PLAN.



Stages of Prostate Cancer

- **Early-Stage | Stages I & II:** The tumor has not spread beyond the prostate.
- **Locally Advanced | Stage III:** Cancer has spread outside the prostate but only to nearby tissues.
- **Advanced | Stage IV:** Cancer has spread outside the prostate to other parts such as the lymph nodes, bones, liver or lungs.

THERE ARE MILLIONS OF PROSTATE CANCER SURVIVORS!

What is the Game Plan for Prostate Cancer that Hasn't Spread?

Early-stage prostate cancer is cancer that has grown in the prostate, but not escaped beyond it to other parts of the body, like *lymph nodes* or bones. There is a very good chance of survival. Your strategy will depend on what you and your health care team decide together:

Active Surveillance can be used for prostate cancer because most prostate cancers never become life-threatening. You may not need treatment right away (or possibly ever). *Active surveillance* is when your health care team tracks your cancer on a set schedule with regular PSAs and other tests. This is a good strategy for people with low-risk and slow growing cancer, or if active treatment is not a good option. It is also a good choice for older people with no other serious health issues. *Watchful waiting* is less involved than active surveillance. Your specialist observes the cancer without regular testing and does not treat it unless symptoms appear. It is good for those who do not want, or cannot have, treatment.

Surgery to remove the entire prostate and seminal vesicles along with nearby lymph nodes is called a *radical prostatectomy*. There are four types:

- *Robotic Assisted Laparoscopic Radical Prostatectomy (RALP)* uses a video camera and small surgical tools that fit through small incisions in the belly. The tools are attached to robotic arms. Your surgeon controls the robot arms to remove the prostate.
- *Laparoscopic Radical Prostatectomy* surgery uses a video camera and small surgical tools that fit through small incisions in the belly to remove the prostate.
- *Retropubic Open Radical Prostatectomy* is when a surgeon makes an incision in your lower belly to remove the prostate.
- *Perineal Open Radical Prostatectomy* is when the prostate is removed through a cut between the anus and scrotum.

Radiation therapy uses high-energy rays to kill the cancer cells. Radiation can be the primary treatment for prostate cancer (instead of surgery). It can also be used after surgery if cancer remains or returns.

The types of radiation therapy commonly used are:

- External beam radiation which uses targeted energy rays from outside the body to treat the prostate.
- Brachytherapy which uses small, radioactive “seeds” placed inside in the prostate during a procedure.

Cryotherapy for prostate cancer is the controlled freezing of the prostate gland. The freezing kills cancer cells. During cryosurgery, your prostate cancer surgeon places small needles into the prostate to freeze the tumor cells.

Focal Therapy and HIFU

Focal therapy is a treatment under investigation for those with prostate cancer. Small tumors inside the prostate are targeted and destroyed without having to remove or radiate the whole prostate. The types of focal therapy currently available are:

- Focal cryoablation which freezes tumor cells.
- High-intensity focused *ultrasound* (HIFU) which uses sound waves to super heat the tumor cells.
- Irreversible electroporation (IE) which uses small electrical currents to kill tumor cells.

Get a balanced picture of the pros and cons for each of your treatment options. Learn about their side effects and what you can do about them in the short- and long-term. Check your insurance coverage and other practical steps you may need to take. Get support. Other prostate cancer survivors can be excellent sources of support. They can help you as you make treatment decisions or deal with any treatment side effects.

What is the game plan after early-stage prostate cancer treatment?

After treatment, you may have side effects to tackle right away. You may feel like you just scored the game-winning touchdown or you could also feel anxious with thoughts of *recurrence* (your cancer returning). Work with your team. After you know your stats and you’ve built a solid game plan, you can set your long-term strategy.

For more information on treatment for prostate cancer, please visit UrologyHealth.org/ProstateCancer.

Your Game Plan for Incontinence

It's time to think about the postseason. A common condition many people with prostates experience is *incontinence*. This is when you can't control your bladder and leak urine. This may affect you but won't stop the game.

What kinds of incontinence are there?

- *Stress urinary incontinence (SUI)* is when urine leaks when coughing, laughing, sneezing or even during workouts. It's caused by problems with the muscles that keep urine in the bladder.
- *Overactive bladder (OAB)* or urge incontinence is when you suddenly feel the need to pass urine and can't stop it from happening. This can happen even when the bladder isn't full.
- Overflow incontinence is when the bladder is too full and urine escapes through the urethra.
- Mixed incontinence is a blend of these different types. Rarely, people with prostates experience continuous incontinence, or not being able to control urine at any time.

What is the game plan to treat incontinence?


While you may feel embarrassed, incontinence is very common and is treatable. In the short-term, your urologist may suggest *Kegel exercises* to strengthen your bladder control muscles. Ask your health care team to refer you to a physical therapist who can train you in *pelvic floor rehabilitation* to learn how to better control and strengthen those muscles. You may also need to change your diet, what you drink or what drugs you take. There are absorbent products that can help you manage the urine. Sometimes medications will be prescribed.

Surgery may be recommended to implant a urethral sling to tighten the bladder neck or an artificial sphincter to squeeze the urethra closed.

How long can cancer-related incontinence last?

After surgery or radiation for prostate cancer, it can take several weeks to several months to regain full urine control. Every patient is different but most people will be able to regain full control. Don't hesitate to talk with your health care team about what to expect and what to do about it.

**STRIVE TO
HAVE A GAME PLAN TO HELP
WITH ANY SIDE EFFECTS.**



What My Pee Tells Me.

- **BPH** causes poor urine flow, leaking, straining and dribbling
- **OAB** is the urgent and frequent need to pee
- **SUI** is when urine leaks with movement, like workouts or sneezing

Still not sure? Talk to your health care team so they can help!

YOUR TREATMENT PLAN SHOULD BE BASED ON YOUR HEALTH AND FULLY DISCUSSED WITH YOUR HEALTH CARE TEAM.

Your Game Plan for Sexual Health

Sexual recovery after prostate health treatment can take time. *Erectile dysfunction (ED)* may happen but there are many options that can help you get back in the game.

What causes erection problems after prostate treatment?

Nerves that are involved in an erection surround the prostate gland. Surgeries and radiation may harm the nerves or the blood flow to the penis, causing ED. While most surgeons may aim to protect the nerves during surgery, it's not always possible depending on your cancer. If nerves are damaged, the brain can no longer send a clear signal to the penis for an erection. While blood will still flow to the penis, it may not get erect enough for sex. People who take hormone therapy may also notice changes in their libido (sex drive) and/or orgasms.

How long can ED last after treatment?

Recovery depends on the type of prostate treatment you had and if you had erection problems before your treatment. It is important to know that many may fully recover, but some will not. Your health care team can offer you many treatment choices.

What is the game plan to treat erection problems?

To reach better sexual health, start with an open and honest talk with your health care team so they can understand your game plan or goals. It also helps to talk openly with your partner, a vital teammate. It can be easier to manage this concern together. Some specialists have their patients try a few options once the body has healed. Things as simple as moderate exercise and keeping a healthy weight are the first steps to improve erection concerns. Oral drugs that improve blood flow to the penis can also be used for ED treatment. Another form of ED treatment is a vacuum erection device (VED) that helps to create an erection by pulling blood into the penis. Injections can also increase blood flow into the penis for an erection.

Some may choose surgery to place a penile implant to create firm erections. You should work with your health care team to find which choice is best for you. What is most important to remember is that you have options.

YOUR HOME TEAM – YOUR LOVED ONES, SUPPORT GROUP MEMBERS, THERAPISTS AND HEALTH CARE TEAM – PROVIDE AN IMPORTANT “HUDDLE OF SUPPORT.”

Your team can help you move forward

When you have prostate cancer your team can help offer hope and improve your quality of life. Taking care of your mental and emotional health is just as vital as the health of your body. Learning you have cancer can be stressful. It can impact you and your loved ones in many ways. It is of great value to know there is help to those needing to navigate their prostate cancer journey. Help can include local support groups, work and financial coaching, rides to health care visits and mental health therapists who focus on giving support to those impacted by cancer.

Mental health can involve emotional, psychological, and social well-being. Start building your team by visiting trusted websites. To learn more about:

- Mental Health help, visit [samhsa.gov/find-help/national-helpline](https://www.samhsa.gov/find-help/national-helpline)
- Prostate Cancer information, visit UrologyHealth.org/ProstateCancer
- Prostate Cancer support, visit ZeroCancer.org/get-support
- Sexual Health help, visit aasect.org
- Veteran programs, visit ZeroCancer.org/help-and-support/resources-for/veterans
- Work/Financial help, visit PatientAdvocate.org

Teamwork can turn the score around. Try to talk about your concerns and hopes to solve problems as part of a team.

What is Advanced Prostate Cancer?

How will I know if my prostate cancer is advanced?

Advanced prostate cancer has spread outside the prostate to other parts such as the lymph nodes, bones, liver or lungs. The best way to know is to watch for changes in your PSA levels. A rise in your PSA after treatment can be a sign that things are changing. Over time, other tests or scans may be done to see if the cancer has advanced.

What is the game plan to treat advanced prostate cancer?

If your prostate cancer reaches the advanced stage, it is like the fourth quarter of a football game. Making smart moves early in the quarter may be advantageous. There are many ways to manage advanced stage prostate cancer. Which treatment to use, and when, will depend on talks with your health care team. Here are treatments you may want to discuss with your health care team about advanced prostate cancer.

Hormone Therapy uses drugs or surgery to help lower testosterone, or hormone, levels. This therapy is also called androgen deprivation therapy (ADT). Testosterone, a male sex hormone, is needed for most prostate cancer cells to grow. Reducing its levels (through surgery or medicine) may slow the growth of those cells in those with advanced disease. Hormone therapy may help slow prostate cancer growth when prostate cancer has metastasized (spread) away from the prostate or returned after other treatments.

There are many types of hormone therapy for high-risk and advanced prostate cancer treatment, and your expert may prescribe a variety of therapies over time.

- **Agonists (analog)** are given as shots or as small pellets placed under the skin, tricking your brain into thinking it does not need to produce testosterone.
- **Antagonists** may be taken as a pill by mouth or injected (shot) under the skin and help block the signal to produce testosterone.
- **Antiandrogen** drugs are taken as a pill by mouth and inhibit receptors so testosterone cannot “feed” the prostate.
- **CAB (combined androgen reducing treatment, with antiandrogens)** blends surgical or medical castration with antiandrogen drugs.
- **Androgen synthesis inhibitors** may be taken as a pill by mouth to help stop the body from releasing chemicals in order to reduce levels of testosterone and other androgens.
- **Androgen receptor binding inhibitors** block testosterone from linking to prostate cancer cells and may be taken as pills.
- **Orchiectomy** is a surgery to remove the testicles to stop the body from making testosterone. This is a surgical type of castration.

Chemotherapy can slow the growth of cancer, may reduce symptoms and extend life and

is an option when cancer has spread to other parts of the body. Or it may ease pain and symptoms by shrinking tumors. During chemotherapy, drugs move throughout the body to kill quickly growing cancer cells and non-cancer cells.

Immunotherapy uses the body's immune system to fight cancer. It may be a choice for those with no symptoms or only mild symptoms. If the cancer returns and spreads, your prostate cancer expert may offer a cancer vaccine to boost your immune system so it can attack the cancer cells. Immunotherapy may be given to patients before chemotherapy, or it may be used along with chemotherapy.

Bone-targeted therapy may help with prostate cancer that has spread to the bones.

Radiopharmaceuticals give off small amounts of radiation that go to the exact areas where cancer cells are growing and may also be used for cancer in bones.

Radiation uses high-energy beams to kill tumors. Prostate cancer often spreads to the bones. Radiation can help ease pain or prevent fractures caused by cancer spreading to the bone. Radiation may be given once or over several visits. The treatment is like having a high-energy x-ray.

Active Surveillance is mainly used to delay or avoid aggressive prostate cancer treatment. It may be a choice for people who do not have symptoms or want to avoid sexual, urinary or bowel side effects for as long as possible. Others may choose surveillance due to their age or overall health.

Fourth Quarter

The treatment goals in this stage of prostate cancer are based on helping you live longer and feel better. The treatments focus on shrinking the tumor(s) and controlling symptoms. Learn up-front about side effects and what you can do about them. Decide with your health care team which plan is best for you. Then stay one step ahead by eating with your health in mind, drinking water and getting more exercise. Even gentle exercise to strengthen bones may help you feel better.

If you feel pain or other symptoms, **speak up** as this may help your health care team know what is going on so they can help you feel your best. It's common for people to feel extra tired, have hot flashes and other issues from prostate cancer treatments. There are ways to ease these problems.

Working as a Team

Based on your needs, you and your health care team can work together on a smart play to help you make the best moves against prostate cancer.

You are not alone. Your journey may include a team with a primary care physician, *genetic counselor*, oncologist, urologist, pharmacist, social worker, *palliative care* team and other health care team members, as well as your family and friends.

The Prostate Health Playbook Glossary

Active Surveillance: Watching low-risk prostate cancer closely using PSA, DRE, other tests and possibly biopsies on a set schedule.

Benign Prostatic Hyperplasia (BPH): Enlarged prostate not caused by cancer; symptoms include problems urinating because as the prostate grows, it squeezes the urethra.

Biomarker Testing: This is genomic testing on tumor cells used to look for genes, proteins, and tumor markers that may help experts diagnose, watch and treat your cancer. These are not passed from parent to child.

Biopsy: Samples of prostate tissue are removed through a needle for review under a microscope to see if they contain cancer or other abnormal cells.

Bladder: A pouch shaped organ in your pelvis in which urine is stored before leaving the body through the urethra.

Bone Scan: A scan to help show if cancer has reached the bones. If prostate cancer spreads to distant sites, it often goes to the bones first.

Bone-Targeted Therapy: Treatments to help strengthen bones, to keep bones healthy and to decrease the number of skeletal-related events.

CT Scan: An imaging test using radiation that can evaluate tissue and organs to see if there are abnormalities.

Digital Rectal Examination (DRE): The insertion of a gloved, lubricated finger into the rectum to feel the prostate.

Ejaculation: Release of semen from the penis during orgasm.

Erectile Dysfunction (ED): Problems getting or keeping an erection.

Genetic Counselor: Health care team member who conducts and explains genetic testing results.

Genetic Testing: Tests used to look for certain inherited changes (mutations/variants) in a person's genes to help find out if a cancer is hereditary (found in nearly every cell and passed from parent to child). To find out if you have a genetic mutation linked to prostate cancer, you may take a simple blood or saliva test.

Genomic Testing: Tests to look closely at cancer genes to help see how DNA and genes work within a cell that may suggest a path to better treating your cancer. Genomic mutations are not passed from parent to child, can happen at any point in one's life and are only found in certain cells.

Germline Testing: This genetic testing can check for germline genetic mutations, found in nearly every cell and passed from parent to child.

Incontinence: Unwanted leakage of urine.

Kegel Exercises: Exercises to strengthen the muscles of the pelvis that control urine flow.

Laparoscopic Surgery: Surgery done with thin, tube-like instruments that allows several small incisions to be made rather than one large incision. Often done with the help of a robot.

Laparoscopic Radical Prostatectomy: Laparoscopic surgery where the entire prostate is removed as part of a cancer operation.

Lymph Nodes: Rounded masses of tissue that can become enlarged when cancer spreads to them.

MRI: An imaging test done with a strong magnet that can evaluate tissues and organs to find abnormalities. Usually has a more precise picture than a CT scan.

Overactive Bladder (OAB): A condition that causes strong sudden urges to pass urine. OAB may cause urine leakage, frequent trips to pass urine and getting up more than once at night to pass urine.

Palliative Care: Medical care to provide relief from pain and other symptoms of a serious illness.

PARP Inhibitor: Targeted therapy which inhibits the PARP mutation and helps stop it from repairing cancer cells.

Pathologist: A specialist who identifies diseases by studying cells and tissues under a microscope.

Pelvic Floor Rehabilitation: Physical therapy designed to help regain bladder control by strengthening the muscles of the pelvis.

Pelvis: The lower part of the torso, between the hip bones.

Perineal Open Radical Prostatectomy: The prostate is removed through a cut between the anus and scrotum.

PET Scan: A positron emission tomography (PET) scan may help your health care team better see where and how much the cancer is growing. The test may use a tracer, such as PSMA, for prostate cancer that is thought to have spread to other parts of the body or after treatment to check that cancer has not returned.

Prostate: A walnut-shaped gland that surrounds the urethra and makes fluid for semen. All people who are born genetically male have a prostate.

Prostatitis: Inflammation or infection of the prostate. Might be acute or chronic.

Prostate-Specific Antigen (PSA): A protein made only by the prostate. High levels of PSA in the blood may be a sign of cancer or other prostate issues.

Radical Prostatectomy: Surgery to remove the entire prostate and cancerous tissues.

Radiopharmaceuticals: Drugs with radioactivity that can target radiation to the exact areas where cancer cells are growing in the bones.

Rectum: The lower part of the bowel, ending in the anal opening (anus).

Recurrence: The return of cancer after treatment in the same location or another part of the body.

Retropubic Open Radical

Prostatectomy: A surgeon will make a cut in the lower belly to remove the prostate.

Robotic Assisted Laparoscopic Radical Prostatectomy (RALP):

Laparoscopic surgery with thin, tube-like instruments connected to robotic arms. The robot is controlled by your surgeon to remove the prostate.

Semen: The fluid that protects and energizes the sperm; also known as seminal fluid or ejaculate.

Sex Therapist or Counselor: A specially trained counselor who can help people and their partners maintain or improve sexual intimacy.

Somatic Testing: This is genomic testing on tumor cells used to look for genes, proteins, and tumor markers that may help your health care team diagnose, watch and treat your cancer. These are not passed from parent to child, can happen at any point in one's life and are only found in certain cells.

Sperm: Also called spermatozoa. Male reproductive cells made in the testicles that can fertilize a female partner's eggs.

Stress Urinary Incontinence (SUI):

A loss of urine that may happen with sneezing, coughing, laughing or exercising, usually caused by muscle weakness.

Tissue: Group of cells similar in form and function found within an organism.

Ultrasound: The use of sound waves to create real-time images to look at organs.

Urethra: A narrow tube through which urine leaves the body. Extends from the bladder to the tip of the penis. In males, semen travels through this tube during ejaculation.

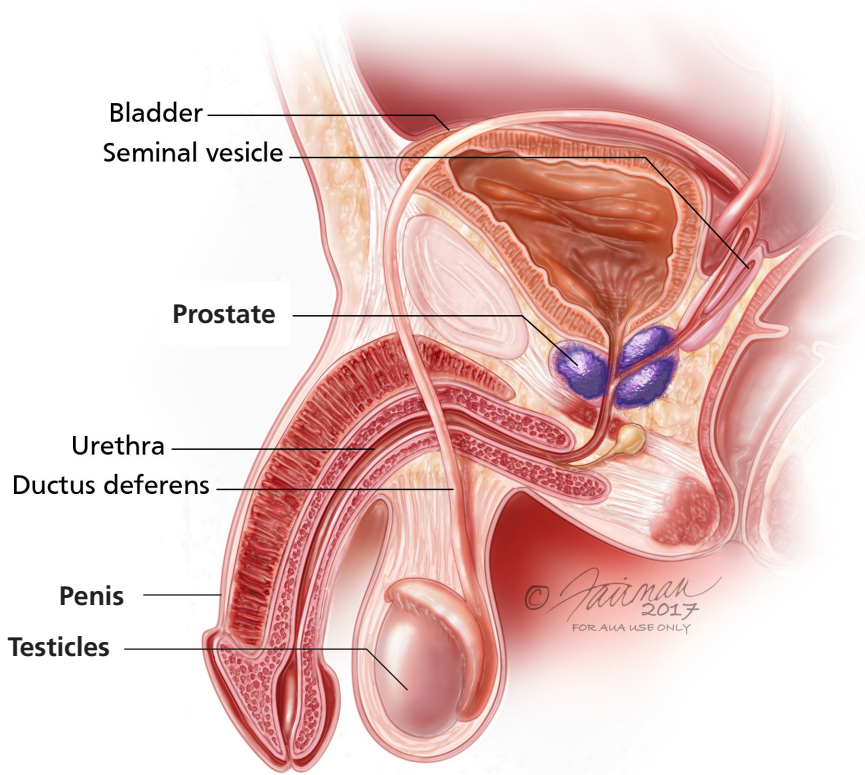
Urinalysis: Urine test to assess the presence of cells, chemicals or infection.

Urine: Liquid waste filtered from the blood by the kidneys, stored in the bladder and removed from the body through the urethra by the act of urinating (voiding).

Urologist: A part of your health care team who specializes in problems of the urinary tract and male sex organs.

Watchful Waiting: Not using a standardized monitoring program and not giving treatment unless signs or symptoms of a disease appear.

MEDICAL IMAGE



The male urinary tract. The prostate surrounds the urethra, the tube that carries urine out of the body.

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Postgame Wrap Up

Prostate health is important. Winning the battle against prostate diseases involves a team approach. Your urologist can be your head coach leading the way. Other health care experts, counselors, your family and your friends make up the rest of your team to put you on the path to victory. When a prostate problem arises, be sure to huddle up with your entire team and move into formation.

Urology Care Foundation

The Urology Care Foundation is the world's leading urologic foundation – and the official foundation of the American Urological Association. We provide information for those actively managing their urologic health and those ready to make health changes. Our information is based on the American Urological Association resources and is reviewed by medical experts.

To learn more, visit the Urology Care Foundation's website,

UrologyHealth.org/UrologicConditions.

Disclaimer

This information is not a tool for self-diagnosis or a substitute for professional medical advice. It is not to be used or relied on for that purpose. Please talk to your urologist or health care team provider about your health concerns. Always consult your health care team before you start or stop any treatments, including medications.

For more information, visit **UrologyHealth.org/Download** or call 800-828-7866.

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