Prostate Cancer Support Association
of New Mexico

# A Guide to Prostate Cancer

RESOURCES AND INSIGHT TO A DIAGNOSIS

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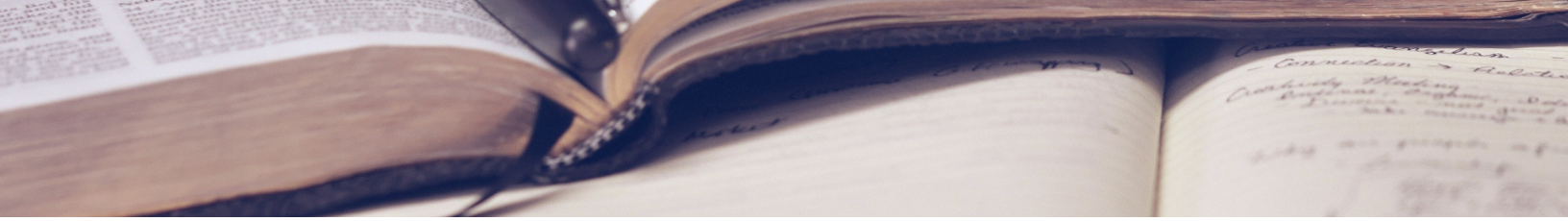
# INTRODUCTION

This document has been prepared by members of the *Prostate Cancer Association of New Mexico (PCSANM)* for your information. We are prostate cancer survivors, not doctors. We believe an informed and educated man, with his medical team, is best equipped to select a treatment that is optimum for him. Prostate cancer diagnosis and treatment is a complex and rapidly evolving field. New drugs and tools are constantly being introduced and approved. Use this document as a starting point for your own research.

Anxiety and distress following a prostate cancer diagnosis may hinder the ability to understand the information given by healthcare providers. Coping with prostate cancer often has physical and psychological implications. Questions of confidence, ability, and ego are likely to surface, causing traditional relationship roles to shift. Communicate openly and often with your loved ones to adjust as smoothly as possible to life changes. The greater your level of understanding, the more confidence you and your loved ones will have in whatever treatment option you choose.



# GLOSSARY OF TERMS

*>> Courtesy of webmd.com & zerocancer.org <<*

**Analgesic**
Medicine used to relieve pain.

**Androgen**
A hormone, such as testosterone and androsterone, responsible for the development of male sex characteristics.

**Antibodies**
Proteins produced by the body to protect itself from foreign substances (such as bacteria or viruses).

**Benign prostatic hyperplasia (BPH)**
Also known as benign (noncancerous) enlargement of the prostate. Almost all men with normal hormonal function (those who produce the male hormone testosterone)
will develop some enlargement of the prostate as they age.

**Biopsy**
Removal of a sample of tissue for study, usually under a microscope. A physician uses ultrasound to guide a small needle into areas of the prostate where abnormalities are detected, to collect cells.

**Carcinoma**
Malignant (cancerous) growth begins in the lining or covering of an organ and tends to invade surrounding tissue and metastasize (spread) to other regions of the body.

**Creatinine**
A blood test involving normal metabolic waste in the body to indicate kidney function.

**Clear margins**
Areas of normal tissue that surround cancerous tissue, as seen during a microscopic examination.

**Metastasis**
The spread of cancer cells from one part of the body to another by way of the lymph system, bloodstream or direct extension.

**Oncology**
The branch of medical science that deals with tumors.

**Remission**
Complete or partial disappearance of the signs and symptoms of disease in response to treatment. The period during which a disease is under control. Remission does not necessarily mean a cure.

**Urologist**
Doctor who specializes in diseases of the urinary and sex organs of humans.


# BACKGROUND INFORMATION

### *What and where is the prostate?*

The prostate is a walnut-sized gland in men located directly in front of the rectum, just below the bladder, and wrapped around the urethra, which drains the urine from the bladder. The prostate produces part of the seminal fluid, protects against infection, and nourishes sperm for fertilization.

### *What problems can the prostate have?*

Besides prostate cancer, there are two other common non-cancerous problems that may affect the prostate – prostatitis, the swelling and inflammation of the prostate, and benign prostatic hyperplasia (BPH), the enlargement of the prostate. Both problems are sometimes accompanied by urinary problems, ejaculation problems, blood in urine and semen, and incomplete emptying of bladder or weak urine stream. Prostatitis is an infection of the prostate with several symptoms. Normally they include frequency of urination and burning with urination. This document does not address these problems, and they require the diagnosis and treatment by a physician. If you have any of these symptoms, seek medical attention.

Prostate cancer begins when healthy cells in the prostate change and grow out of control and form a tumor. A tumor can be cancerous or benign. A cancerous tumor is malignant, meaning it can grow and spread to other parts of the body. A benign tumor means the tumor can grow but will not spread.

According to Cancer.Net:

*Prostate cancer is somewhat unusual when compared with other types of cancer. This is because many prostate tumors do not spread quickly to other parts of the body. Some prostate cancers grow very slowly and may not cause symptoms or problems for years or ever. Even when prostate cancer has spread to other parts of the body, it often can be managed for a long time. So people with prostate cancer, and even those with advanced prostate cancer, may live with good health and quality of life for many years. However, if cancer cannot be well controlled with existing treatments, it can cause symptoms like pain and fatigue and can sometimes lead to death. An important part of managing prostate cancer is watching for growth over time to find out if it is growing slowly or quickly.*

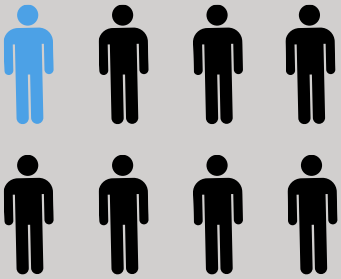
Doctors cannot determine whose prostate cancer will progress to become clinically significant and whose will not. Generally, patients with low PSA, low Gleason, and low-stage diagnoses have a longer disease-free time after any therapy than those with aggressive or advanced disease.

There is no cure known for prostate cancer. However, the options for treatment are improving as time moves on. Effective control and durable remission are frequently experienced.

# About Prostate Cancer

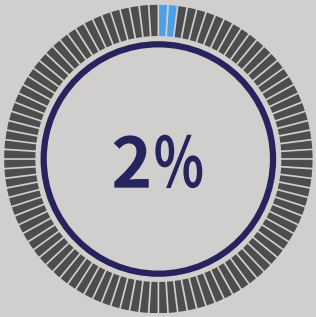
Each year 200,000 or more American men are diagnosed with prostate cancer.

In New Mexico, more than 1,000 men are diagnosed annually with prostate cancer.



About 1 in 8 men will be diagnosed with prostate cancer during their lifetime.

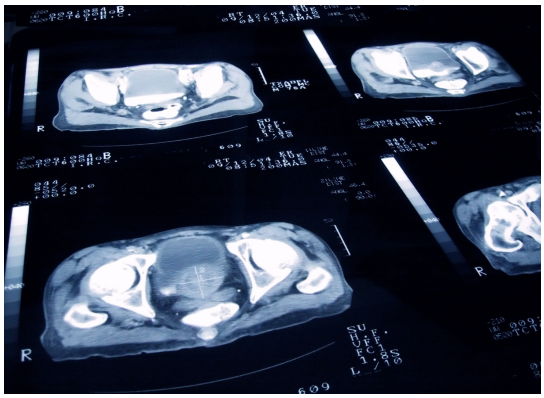
African American men are diagnosed at a higher rate of about 1 in 6 and tend to have a more aggressive diagnosis. Hispanics, Asians, and Native Americans are less likely than Caucasian men to have prostate cancer. Men with a close family relative (grandfather, father, brother, or son) who has or has had prostate cancer are more likely to have prostate cancer than other men.




Between 2-3% of American men die of prostate cancer, or less than 30,000 every year. Most men, including most men with prostate cancer, die from other causes.

# Early Detection & Screening

The Prostate Cancer Support Association of New Mexico encourages men to begin baseline screening at age 45. It is desirable to find and treat any cancer in its early stages when the possibility for a cure is greatest. Prostate cancer is no exception, but opinions vary as to when, or if, a man should first be screened for prostate cancer.



Screening can result in false positives that may trigger a sequence of events leading to unnecessary treatments and undesirable side effects. Many authorities recommend that the patient review the issue with his physician and make the decision for himself. Various medical experts and medical professional associations have published their recommendations for ages at which prostate screening should be performed.

**Recommendations:**

The American Urological Association (AUA) recommends that men between the ages of 55 and 69 should be screened, while the National Comprehensive Cancer Network (NCCN) recommends screening be done for select groups and ages with a baseline screening at age 45. The Mayo Clinic, the American College of Physicians, and US Preventative Task Force, the American Cancer Society, and others have their own specific recommendations. The earliest screening recommended is age 40, when there is a known family history of prostate cancer, or if the man is African American. Different recommendations exist, causing confusion and seeming contradiction. As a result, health care providers may be reluctant to recommend screening, and men may not know to request it.


# DIAGNOSIS & STAGING

### *How is prostate cancer detected?*

Prostate cancer is generally suspected when a prostate-specific antigen (PSA) blood test indicates an elevated PSA level and/or when a digital rectal exam indicates prostate irregularities. Both of these tests may be performed during a man's annual physical.

The PSA blood test is conducted on blood drawn, usually from the arm, when other blood tests are performed. Normally, prostate-specific antigen (PSA), a protein, leaks from normal prostate cells in small amounts, but an elevated rate of leakage can indicate the presence of prostate cancer cells or other irritants. The use of PSA testing to screen for prostate cancer has become controversial, as noted above. PSA tests can be misleading; please discuss the benefits and limits of PSA testing with your health care provider.

Learning your PSA establishes a baseline for future PSA checks. Small variations can occur in PSA numbers, due to sexual intercourse or activities such as cycling or horseback riding, that put pressure on the prostate. Certain prescription medications can also affect PSA.

PSA is also used after therapy as a monitor to indicate therapy failure and if prostate cancer is under control. In this setting, the PSA value is very reliable.

# PSA Level Breakdown

Men can have prostate cancer even if they have a normal PSA level, but cancer is more likely with an elevated PSA level.
When PSA levels are:

- **Below 4:** 15% chance of prostate cancer.
- **Between 4 and 10** *(the borderline range):* 25% chance of prostate cancer.
- **Above 10:** More than 50% chance of having prostate cancer.

It should be noted that as men grow older, an increase in PSA is normal.

A digital rectal exam (DRE) is conducted by the physician by inserting a gloved finger into the rectum and feeling the back surface of the prostate through the rectal wall. Irregularities in the prostate, as well as the prostate size, can be determined by this test. Irregularities can indicate the need for additional investigation.

## *How do I know if I have prostate cancer?*

A biopsy is used to confirm suspected prostate cancer. An ultrasound probe is inserted into the rectum and hollow needles are “shot” through the rectal wall into the areas of the prostate most likely to have cancer. Twelve or 16 samples, or cores, are commonly taken. These biopsy cores are tiny samples of tissue that can be inspected by a pathologist under a microscope. The pathologist will determine if they are cancerous by their cell structure.

## *How can a person judge the aggressiveness of the disease?*

If any of the biopsy tissue is cancerous, the pathologist will assign a pair of numbers describing what is seen in the tissue of the biopsy core. The first number describes the type of cells seen in the largest quantity in the sample and the second describes the next largest kind. The two numbers are used to identify the aggressiveness of cancer and are expressed as the Gleason sum or number. Two (1 + 1) is the lowest, or best. Ten (5 + 5) is the most aggressive, or worst. Sums lower than 6 are seldom reported as they usually don’t describe cancerous material.

## TNM Classification

The DRE allows the doctor to assess the location and extent of irregularities in the prostate. The results are reported using the TNM classification system. T refers to the tumor. T1 and T2 indicate localized prostate cancer. Stage T3 and T4 indicate increasing degrees of the tumor outside the prostate. The N refers to the disease in the lymph nodes, and M refers to metastasis. These estimates are useful when developing treatment protocols for each patient.

### *What are clinical staging and risk evaluation?*

Clinical staging is the doctor's estimate of the size and location of the cancer based on evidence from diagnostic tests. The starting point for the various staging systems is the use of the PSA value, TNM score, and the Gleason score. Using these criteria, the physician will assign a "risk group" to the patient's diagnosis.

| RISK GROUP | GRADE GROUP | GLEASON SCORE | OTHER CRITERIA |
|---|---|---|---|
| Very low | 1 | 6 or less | No DRE results, Low PSA |
| Low | 1 | 6 or less | T1-T2, PSA <10 |
| Intermediate Favorable I | 2 | 3+4 | T2b/c, PSA10-20 |
| Intermediate Unfavorable | 3 | 4+3 | T2b/c, PSA10-20 |
| High | 4 | 8 | T3a, PSA> 20 |
| Very High | 5 | 9-10 | T3b-T4, PSA any |

# SCANS & IMAGING

**Bone Scan**

The technetium-99m bone scan has been used for years to identify metastasized prostate cancer in bones and is readily available. This scan is often prescribed as a matter of course by some doctors and prescribed by others only when metastases are suspected. This technique shows the locations of larger bone metastases that have lodged in the bones, but it may miss smaller, early metastases.

**MRI**

Magnetic Resonance Imaging (MRI) scans have been developed for imaging the prostate and the surrounding tissue. The 1.5 Tesla MRI instrument, with and without the use of a rectal probe, has been commonplace, and it is a useful technique for imaging the prostate. The newer 3 Tesla MRI instrument creates a stronger magnetic field and better images. With the stronger field and computer enhancement programs, the 3 Tesla units provide greater precision for the investigation of the prostate and surrounding tissue. The multi-parametric MRI scan is often reported using the Prostate Imaging Reporting and Data System (PI-RADS) and can give an estimate of risk for aggressive prostate cancer.

The recent combination of the MRI and the ultrasound biopsy technique has provided greater precision for the sampling of potential prostate cancer lesions in the prostate and the immediately surrounding tissue. This practice offers the future possibility to eliminate random biopsies.

**CT**

These are imaging tests that develop three-dimensional images in the computer from x-ray data by a process called Computed Tomography (CT). The images from these scans are similar in many respects to MRI scans. CTs can show some larger areas of prostate cancer. These can be used for small areas of the body but are frequently used as whole body scans.

**PET/CT Scan**

In general, a positron emission tomography (PET) scan is an imaging technique that uses a radioactive drug (tracer) to show both normal and abnormal metabolic activity. The tracer will then collect in areas of the body that have higher levels of metabolic or biochemical activity. The PET images are typically combined with CT or MRI and are called PET-CT or PET-MRI.

## Genetic Testing

This is a new set of different tests to help the clinician to determine if proceeding with conducting biopsies and/or aggressive therapies for the patient is warranted. If the tests show an indolent cancer, the clinician may recommend active surveillance. If the test demonstrates that the patient is susceptible to a high-risk form of prostate cancer, the clinician might recommend a group of combination treatments. Details of the different tests are beyond the scope of this document, but the names of several are 4K, Oncotype DX, Prolaris, Intelliscore, and Prostate Next. None of the genetic tests are definitive at this time.

# QUESTIONS TO ASK YOUR HEALTHCARE TEAM

*>> Courtesy of Cancer.Net <<*

## General

- *What support services are available to me? To my family?*
- *Who will be part of my health care team, and what does each member do?*
- *If I have questions or problems, who should I call?*

## After getting a diagnosis

- *What type of prostate cancer do I have?*
- *How aggressive is the cancer?*
- *Can you explain my pathology report (laboratory test results) to me?*
- *What stage is the prostate cancer? What does this mean?*
- *What is the Gleason score of the prostate cancer? What does this mean?*

## Regarding your prostate cancer risk & screening

- *What type of prostate cancer screening schedule do you recommend for me, based on my individual medical profile and family history?*
- *What are the risks and benefits of the PSA test?*
- *Are there any changes I can make to my diet that can help lower my risk of prostate cancer?*

# Choosing a Treatment


- *How much experience do you have treating this type of cancer?*
- *What are my treatment options?*
- *What clinical trials are available for me? Where are they located, and how do I find out more about them?*
- *Does this prostate cancer need to be treated? What would happen if I choose not to start treatment now?*
- *What treatment plan do you recommend? Why?*
- *What is the goal of each treatment? Is it to eliminate the cancer, help me feel better, or both?*
- *What are the possible side effects of each treatment, both in the short term and the long term?*
- *How will treatment affect my emotional well-being?*
- *Who will be part of my health care team, and what does each member do?*
- *Who will be leading my overall treatment?*
- *How will this treatment affect my daily life?*
- *Will I have difficulty controlling my bladder or bowel function after treatment?*
- *Could this treatment affect my sex life? If so, how and for how long?*
- *Could this treatment affect my ability to have children? If so, should I talk with a fertility specialist before cancer treatment begins? Should I consider sperm banking?*
- *If I'm worried about managing the costs of cancer care, who can help me?*

***LEARN MORE AT:***
>> Cancer.Net <<

# LOCAL TREATMENT

When it is determined the cancer is contained in the prostate, a man is a candidate for what is called *local* treatment. The common treatments, and some of the less commonly available treatments, are described below. All treatments have side effects, some severe and lifelong, while some are short-lived and reversible. Men are urged to discuss the side effects with his doctor before embarking on any treatment to make sure they are aware of and can tolerate the side effects as well as the treatment.

### Active Surveillance and Watchful Waiting

Both terms mean no active immediate treatment. There are some studies that indicate this option results in just as long a life as immediate treatment. This option is most often recommended to men 75 years or older, to men with less aggressive forms of prostate cancer, or to younger men who have a condition that makes other treatments risky. With active surveillance, testing is performed regularly.

***Side effects:*** There are no side effects from this approach, as no active treatment is being used. If the disease progresses, active treatment can be initiated.

### Surgery (Radical Prostatectomy)

Robotic surgery is replacing open radical surgery and laparoscopic techniques. The nerve-sparing technique of robotic surgery is preferred. The lower abdomen is entered, the prostate is removed, and the severed urethra is sewn back together. The patient usually spends three to six days in the hospital if open surgery is undergone, and fewer days with the robotic and laparoscopic techniques. A portable urinary catheter is worn for a week or longer. Surgeons usually recommend this treatment for healthy men in their sixties or younger.

***Side effects:*** Side effects for surgery are hard to quantify and depend on the patient's anatomy and the skill of the surgeon. Some reports show between 24 to 62% of men may become sexually impotent, and 5 to 19% percent may become severely incontinent. Some studies show incontinence over 60%. Other complications that are usually well below 10% are fecal incontinence, major bleeding, blood clots in the legs or lungs, bladder neck narrowing, and urethral narrowing.

### Cryosurgery (freezing)

In this technique, hollow probes are set into the prostate from the perineum (the area between the scrotum and the anus), and the cancerous tissue is frozen.

### High-Intensity Focused Ultrasound (HIFU)

This is a new technique, similar to external beam radiation, during which high-intensity sound is used to destroy cancerous tissues in and near the prostate. HIFU has recently been FDA-approved for use in the United States.

### Focal Laser Ablation Therapy

This new technique uses a laser, guided by multi-parametric MRI images, to destroy cancerous tissues in the prostate. This technique is still in clinical trials at this time and is only available in select facilities.

***Side effects:*** Those from cryosurgery and HIFU are more similar to radiation than surgery. The side effects of these relatively new techniques have not been well documented yet.

### External Beam Radiation Therapy (EBRT)

Intensity modulated radiation therapy (IMRT) and volumetric arc therapy (VMAT) using image-guided radiation therapy (IGRT) are common forms of EBRT. EBRT uses a machine much like an X-ray machine to send high-energy radiation to your prostate and possibly areas around the prostate. This treatment is typically delivered for 5 days a week at least for several weeks. The average treatment time is under 15 minutes. Radiation is often recommended over surgery for older men or men that have other health issues. EBRT does not typically require a hospital stay.

All of these treatments and their side effects are for *local* treatments; they only treat the prostate gland and/or the local area in and around the prostate. Local treatments generally have disease recurrence of 4 to 5% per year. PSA readings after therapy are used to detect disease progression and the possibility of recurrence.

### Stereotactic Beam Radiation (SBRT)

SBRT is a form of EBRT where the radiation dose is increased compared to EBRT and the number of treatments is shortened. The resulting saving of time is favorable for the patient, and current information indicates that for many patients SBRT is as effective as longer EBRT regimes with little to no additional side effects. These stereotactic treatments can be delivered equivalently using a variety of machines and techniques such as EBRT, Cyberknife, Proton therapy, combined MRI or PET linear accelerators, etc.

### Proton Beam

Proton beam therapy is a specialized form of EBRT. The major advantage of this therapy is that the energy distribution of protons is almost entirely in the tissue of the prostate, resulting in minimal damage to the surrounding tissue.

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***Side effects:*** Following radiation, about 12-30% of men experience some degree of sexual impotence. Incontinence also occurs in a few percent of men. Inflammation of the bladder, rectum and intestines during treatment usually goes away. Chronic inflammation can result in strictures or bleeding that require surgical intervention in up to 2-5% of men.

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### Brachytherapy (radioactive seeds)

Brachytherapy is the insertion of radioactive pellets (seeds) in the prostate through hollow needles. Seeds may be permanent (low-dose) or impermanent (high-dose). Low-dose seed implantation (LDR) is often performed on an outpatient basis. LDR seeds are never removed. In high-dose brachytherapy (HDR), highly radioactive material is slid into the prostate through tubes for several hours and then removed. This allows for higher radiation and more specific placement. An overnight stay in the hospital is not usually required. HDR can be followed up by EBRT, if required.

***Side effects:*** Impotence is reported in 10 to 25% of men, and incontinence in 2% or less. Urinary problems – urgency, frequency, burning, irritation – occur in about 25% of men but usually resolves within a few months.

## Questions to ask your provider about side effects from treatment

- *What are the possible side effects of each treatment, both in the short term and the long term?*
- *How will treatment affect my emotional well-being?*
- *Who will be leading my overall treatment?*
- *How will this treatment affect my daily life?*
- *Will I have difficulty controlling my bladder or bowel function after treatment?*
- *Could this treatment affect my sex life? If so, how and for how long?*
- *Could this treatment affect my ability to have children? If so, should I talk with a fertility specialist before cancer treatment begins? Should I consider sperm banking?*

# LOCALLY ADVANCED AND POSSIBLY METASTATIC PROSTATE CANCER AND/OR RECURRENCE

If the cancer has advanced beyond the prostate capsule when initially diagnosed, it is considered to be an advanced cancer and metastatic. If local treatment with intent to cure has been performed, and the cancer is later found to have escaped and is found somewhere else in the body, the disease is said to be recurrent. Both conditions require similar treatments.

## Scans

Scans for metastatic prostate cancer are powerful and comprehensive. PCSANM expects, in time, they will be used for conducting earlier diagnoses.

### Axumin

The Axumin scan (fluciclovine F 18 tracer) works by detecting the metabolic activity of the cancer itself. Axumin is currently prescribed for PET imaging in men with suspected prostate cancer recurrence based on elevated PSA levels following prior treatment. The Axumin tracer can be prepared off-site and shipped short distances for use. Accuracy of Axumin appears to increase when PSA levels are above 2.

**Prostate Specific Membrane Antigen (PSMA)**
This is a transmembrane protein found on prostate cells, and it is expressed in the prostate cancer cells several hundred times greater than on ordinary prostate cells. It has been found that the Ga 68 PSMA-11 radioactive isotope binds readily to the PSMA protein. Because of the over-expression of the PSMA by the cancer cells, those cancer cells provide larger and stronger images when scanned by PET. The Ga 68 PSMA-11 isotope was approved by the FDA in December 2020, and the FDA approved Pylarify, the imaging agent using 18F-DCFPyL, in May 2021. Increasingly precise and complete identification of prostate cancer is expected from this technique, but the scans have not yet been widely available. The current FDA approvals cover two main groups of patients: high-risk men before starting treatment with prostatectomy or radiation therapy, and men who have already been treated for localized prostate cancer and have a rising PSA.

## Treatment

A person needs to weigh the possible effects of each treatment considering his age, lifestyle, and personal outlook.

**To stop the production of testosterone:**

**Androgen Deprivation Therapy (ADT, aka hormone therapy)** is used to describe the systemic therapy to stop production of testosterone or, alternately, methods to block the absorption of testosterone by cells. Testosterone production and prostate cancer cell utilization of testosterone can be stopped with drugs called LHRH agonists and anti-androgens. This is sometimes called chemical or medical castration. This is usually reversible when one stops taking the drugs. ADT can be used alone, before surgery or radiation to shrink the prostate, to delay the disease and give a person time to study the available options, or in cases (such as cancer that is metastatic when initially diagnosed) where local therapies cannot be used. The important thing about ADT is that it is “systemic” and works throughout the body. There are documented cases of no cancer being found in the prostate after a course of ADT. Longer ADT results in a higher percentage of no cancer being found. Studies have shown a six to 12-month ADT treatment is better than a three-month treatment. In some circumstances, ADT treatment may be continued for years.

**Upfront ADT –** In the past, ADT was only used when prostate cancer had progressed to lymph nodes or bones. Now it is used by some doctors "upfront," as soon as prostate cancer is detected, and it has become common to add ADT to local treatment. ADT acts as an adjunct to other forms of active treatments. Five-year results are encouraging. Early ADT when combined with local therapies has shown a significant reduction in prostate cancer deaths.

Basic drugs used to block the production of androgens:

Testosterone-lowering drugs used for ADT are ***Lupron, Zoladex, Eligard, and Trelstar. Firmagon*** achieves the same results but works slightly differently. These are injections given in either one, three, or six-month doses.

The drugs described below are often combined with ADT when ADT alone doesn't achieve satisfactory prostate cancer treatment. These are most often used for recurrence.

**Your healthcare team will always direct and guide the prescription and use of medications.**

**Zytiga**

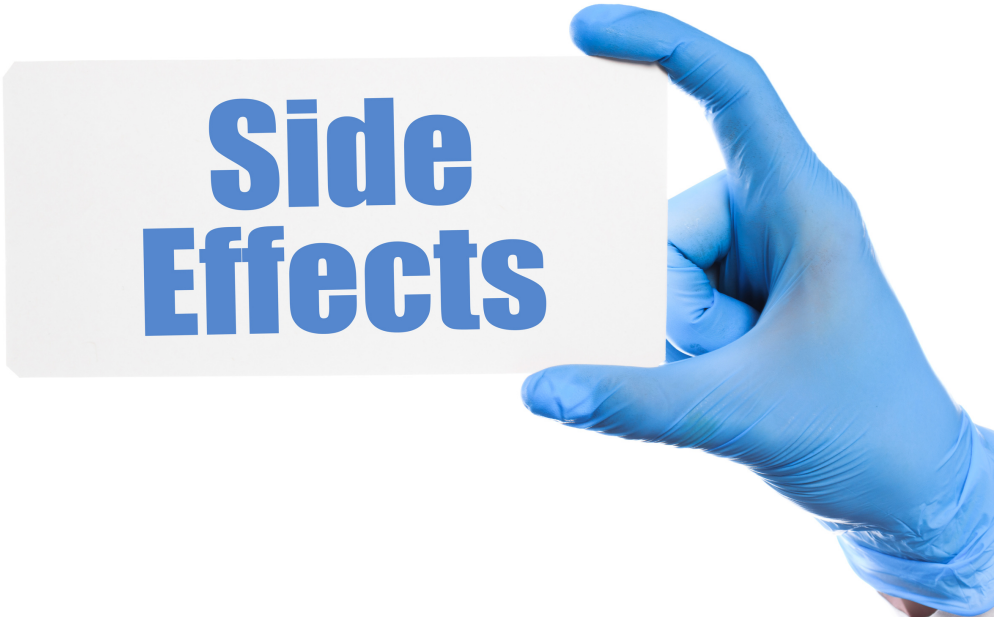
This drug is generically called abiraterone. It is taken as a daily pill and is often used when the basic ADT drugs become less effective or ineffective. This drug works by interfering with an enzyme in tissues that produce androgens (testicles, adrenal glands and in metastatic tumors). To help maintain some other hormones in the body, and because of some side effects, prednisone (another pill) is taken with Zytiga.

Drugs that block the cellular absorption of androgens work by blocking testosterone absorption at the cell. They are administered by taking a pill.

Xtandi (Enzalutamide)
Apalutamide (Erleada)
Nubeqa (Darolutamide)
Nilandon (Nilutamide)
Casodex (Bicalutamide)
Flutamide

***Side effects of androgen deprivation therapy*** The loss of androgens creates the potential for many undesirable side effects. Men exhibit various susceptibilities to ADT, ranging from none or mild to severe. The potential side effect list is long and includes loss of libido, erectile dysfunction, muscle loss, fat and weight gain, blood clots, bone loss, hot flashes, fatigue, breast soreness or enlargement, and nausea. Under prolonged treatment, liver damage or osteoporosis may occur.

Sometimes for resistant cases, the cancer, despite the best efforts of the doctors, stops responding to testosterone-lowering drugs. The cancer is then considered to be castration-resistant prostate cancer (CRPC). Chemo, immunotherapy, genetics, and other treatments may be tried.



***Other treatments available for advanced and metastatic prostate cancer:***

The treatments listed below are usually given as the cancer progresses and ADT is maintained.

### Xofigo- Radium-223 dichloride

This is a radiopharmaceutical designed to kill prostate cancer cells in the bone metastases. The carrier drug delivers the radium isotope to the bones, where it delivers a very short-range form of radiation directly to the cancer cells.

### Chemotherapy

Chemotherapy drugs are normally given via IV infusion, usually with other drugs given before beginning each infusion to ease the process for the patient. Daily prednisone pills are taken during this treatment to limit or prevent side effects. The two drugs below are those most commonly used; others may be used in patients for whom these drugs cannot be used or have become ineffective.

***Docetaxel*** – This is the most commonly used chemotherapy drug, which is also known as Taxotere. Infusions are given every one to three weeks.

***Jevtana*** – This new drug (generically called cabazitaxel) is usually given to patients previously treated with Docetaxel. Infusions are given every three weeks.

**There are plenty of recommendations and resources of support to help gain a better general understanding of prostate cancer and your particular situation.**

### Immunotherapy

Immunotherapy is a means of stimulating the body's immune system to fight cancer. The human immune system has evolved to address many disease threats. When cancer is detected, it is probably because the person's immune system is failing to recognize the cancer as a threat and is unable to activate the white blood cell's infection fighters, the "T" cells, and train them to recognize the cancer. An extensive discussion of this topic is beyond this document, but it is important to note that some of the drugs that have been used as prostate cancer immune system stimulating drugs are Keytruda, Yervoy, and Leukines.

One immunotherapy treatment has been approved by the FDA: Provenge. This is a complex treatment procedure requiring several cycles of collection and treatment of the patient's own blood cells, followed by infusion back into the patient. Effectiveness verification is difficult, since Provenge does not affect PSA values, but clinical data show this treatment does extend patient survival. Several other immunotherapy approaches are currently in varying stages of development and may be available within the next few years.

## Genetic Testing

This is a new and developing field for the diagnosis and treatment of prostate cancer. PCSANM believes that this field will become more useful for future prostate cancer patients.

Many genetic tests have been developed to help determine what treatments are appropriate for individual patients and how aggressive the treatment regime should be.

There are two drugs currently approved for use in the genetic treatment for metastatic castrate-resistant prostate cancer, Lynparza (Olaparib) and Rubraca (Rucaparib). These drugs work on BRCA1, BRCA2 (and ATM) gene mutations. The details of their operation are beyond this guide.

It is recommended that one researches the topic of genetic testing, and discusses with members of their healthcare team.

# RESOURCES & PROGRAMS

- ·PCSANM recommends that the newly diagnosed get a copy of the Prostate Cancer Foundation's Prostate Cancer Patient Guide. The newly diagnosed should read chapters one through three for an excellent review of current prostate cancer diagnosis and treatment choices for prostate cancer. Hard copies of this book are available from the PCSANM office, or a PDF copy can be downloaded from the Prostate Cancer Foundation website at:

  **>> pcf.org <<**


- ·PCSANM has trained facilitators (prostate cancer survivors) who will sit down with you to discuss your unique situation and make recommendations for further information specific for your situation. We encourage family members to join in this session as this disease and its treatment potentially affects all members of the family.

- ·Take advantage of the PCSANM "buddy list." The list provides the names of PCSANM members who are willing to share their experiences with their particular treatment. Almost every treatment available today has been experienced by individuals on this list.

- ·Attend PCSANM support group meetings (offered on the first and third Saturday of most months). These meetings regularly have presentations that cover issues regarding prostate cancer treatment and diagnosis, plus every meeting has opportunities for members to share their current medical concerns or experiences.

- ·It is strongly recommended that a patient consult more than one doctor before embarking on any treatment. A second or even a third opinion will help to eliminate any one practitioner's bias for a particular treatment.

- ·Patients can get new, novel, and innovative treatments by participating in clinical trials for new drugs and other treatments.

- ·Book lists, internet addresses, telephone helpline numbers, video/DVD presentations, and mentor/buddy lists are available from PCSANM. Call, email, or visit the PCSANM office or the PCSANM website at **>> pcsanm.org.<<**

# Recommended sources of information

**Prostate Cancer Research Institute**
300 Corporate Pointe, Suite 383
Culver City, CA 90230
(310) 743-2116
**>> pcri.org <<**

**Zero—The End of Prostate Cancer/Us TOO Support Groups**
515 King Street, Suite 420
Alexandria, VA 22314
(844) 244-1309
**>> zerocancer.org/learn/prostate-cancer-news/ <<**

**Prostate Cancer Foundation**
1250 Fourth Street
Santa Monica CA 90401
(800)757-2873
**>> pcf.org <<**

**Prostate Cancer Treatment Guide**
>> **prostate-cancer.com** <<

**National Cancer Institute**
1-800-4-CANCER
**>> cancer.gov/types/prostate <<**

**Mayo Clinic**
**>> mayoclinic.org/diseases-conditions/prostate-cancer/symptoms-causes/syc-20353087 <<**

**National Alliance of State Prostate Cancer Coalitions**
**>> naspcc.org <<**

**>> cancer.net <<**

**For a comprehensive list of reliable sources:**
pcsanm.org/related-websites/

**Prostate Cancer Support Association of New Mexico**


2533 Virginia St NE, Suite C
Albuquerque, NM 87110

(505) 254-7784
(800) 278-7678
pchelp@pcsanm.org

pcsanm.org





*(Revised March 2023 by Lou Reimer, Dr. Gregg Franklin, et al.)*