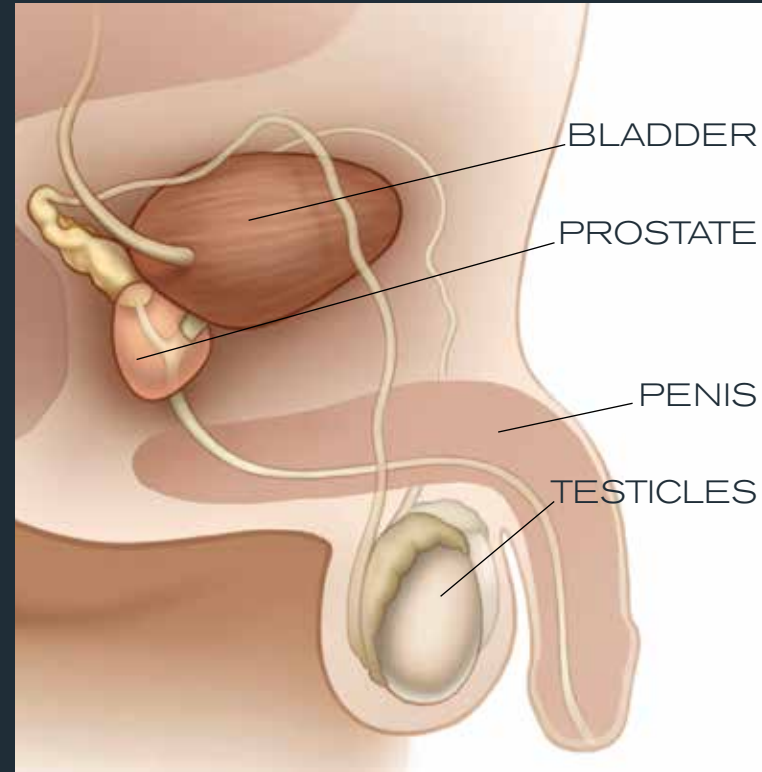




A PATIENT'S GUIDE  
TO PROSTATE CANCER



THE PROSTATE IS A SMALL, WALNUT-SIZED GLAND THAT IS PART OF THE MALE REPRODUCTIVE SYSTEM. IT RESTS BELOW THE BLADDER, IN FRONT OF THE RECTUM AND SURROUNDS PART OF THE URETHRA. ITS PURPOSE IS TO SECRETE COMPONENTS OF SEMEN.

ASIDE FROM SKIN CANCER, PROSTATE CANCER IS THE MOST COMMON FORM OF CANCER IN MEN. IN FACT, 1-IN-7 MEN WILL BE DIAGNOSED WITH PROSTATE CANCER DURING HIS LIFETIME. PROSTATE CANCER CAN OFTEN BE FOUND EARLY USING A SIMPLE BLOOD TEST.



# EARLY PROSTATE CANCER DETECTION

**WHEN IT COMES TO PROSTATE CANCER, EARLY DETECTION IS VITAL. ACCORDING TO THE AMERICAN CANCER SOCIETY, THE 15-YEAR RELATIVE SURVIVAL RATE IS 96%. THE FOLLOWING METHODS ARE A FEW WAYS TO SCREEN FOR PROSTATE CANCER.**

## **PSA SCREENING**

Prostate-specific antigen, or PSA, is a protein produced by cells of the prostate gland. The PSA test measures the level of PSA in a man's blood. The blood level of PSA is often elevated in men with prostate cancer. Those who report prostate symptoms may often undergo a PSA screening, in conjunction with a digital rectal exam (DRE), to help determine the nature of the problem and non-cancerous conditions.

Elevated PSA levels may also occur in a number of non-cancerous (benign) conditions. The most common conditions that lead to a rise in PSA levels are inflammation of the prostate (prostatitis) and enlargement of the prostate, also known as benign prostatic hyperplasia (BPH).

## **DIGITAL RECTAL EXAM**

A digital rectal exam (DRE) is performed by a physician who inserts a gloved, lubricated finger into the rectum. The purpose of the exam is to feel for any irregularities in size, shape, and texture of the prostate. A DRE can often be used in conjunction with a PSA screening to distinguish between prostate cancer and non-cancerous conditions.



**“YOU CAN DO  
A LOT. YOU CAN  
LEARN A LOT.  
IT’S A VERY  
TREATABLE  
DISEASE.”**

JOHN AGUZINO,  
PROSTATE CANCER  
SURVIVOR

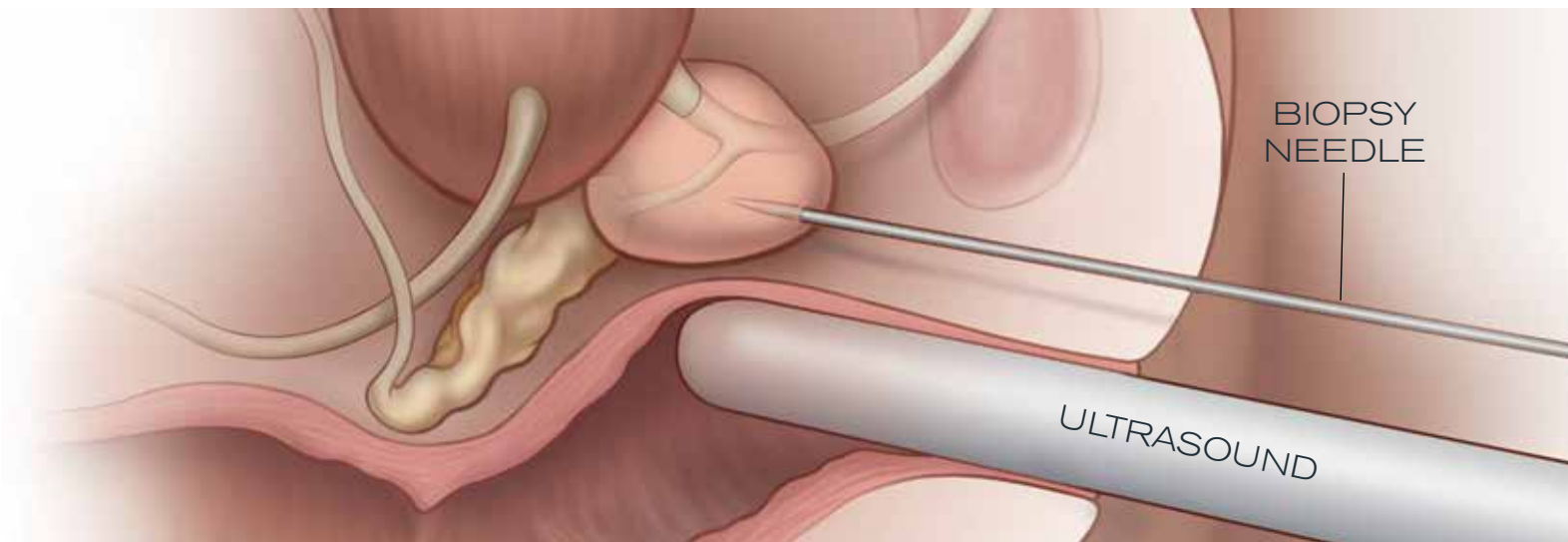
# UNDERSTANDING YOUR DIAGNOSIS

## GLEASON SCORE

A Gleason score is a system of grading prostate cancer tissue based on microscopic imaging. The Gleason score may range from 2 to 10 and is used as an indicator of potential for the cancer to spread. A lower Gleason score indicates that the cancerous tissue is closer in nature to normal, healthy prostate tissue and therefore is less likely to spread. A higher Gleason score indicates that the cancer tissue is less like the normal prostate tissue and is more likely to spread.

## BIOPSY

In a prostate biopsy procedure, small hollow needle cores are inserted into the prostate to extract prostate tissue for microscopic analysis. In the diagnostic phase, a biopsy may be performed if the results of a PSA Screening are elevated to a clinical level that is associated with prostate cancer. In addition to a biopsy exam, a transrectal ultrasound (TRUS) may be performed to determine prostate volume, which aids in the determination of diagnosis.



# CANCER STAGING

**A STAGING SYSTEM IS A STANDARD WAY TO DESCRIBE HOW FAR A CANCER HAS SPREAD. THERE ARE 4 CATEGORIES FOR DESCRIBING THE LOCAL EXTENT OF A PROSTATE TUMOR, RANGING FROM T1 TO T4.**

## STAGE T1

Prostate cancer is in its earliest stage. Your doctor cannot feel the tumor or see it with imaging such as transrectal ultrasound.

## STAGE T2

The cancer is still localized within the prostate. Your doctor can feel the tumor with a digital rectal exam (DRE) or see it with imaging.

## STAGE T3

The cancer has grown outside of the prostate and into surrounding tissue, such as the seminal vesicles.

## STAGE T4

The cancer has spread into tissues next to the prostate (other than the seminal vesicles), and perhaps other organs such as the bladder, lungs or liver.

# TREATMENT OPTIONS

## BRACHYTHERAPY

Brachytherapy, sometimes referred to as internal radiation therapy or interstitial radiation, is a form of cancer treatment where low-level radioactive seeds or pellets are implanted into the treatment site to destroy malignant tissue. For prostate cancer, seeds are permanently implanted directly into the prostate, around or in the site of the tumor. The implanted seeds deliver a prescribed dose of radiation directly to the cancerous cells with limited radiation exposure to surrounding tissue.



**“ My doctor said Brachytherapy was the best answer to my cancer. ”**

- Merle B. from San Diego, CA  
Cancer Free for 9 Years

Over time, typically several weeks, the low-level radiation emitted from the seeds diminishes and the harmless seeds are permanently left in place. Depending on diagnosis and patient factors, brachytherapy may be used alone or in conjunction with other therapies. Generally, brachytherapy treatment is an outpatient procedure. Some patients may experience short term side effects such as frequent, urgent, or uncomfortable urination. These symptoms typically decrease in severity and occurrence as time passes, due to the seeds losing their radioactive strength. Some long-term side effects may include incontinence and impotency, however patients over the age of 70 are the most likely to experience these side effects.

## SURGERY

A prostatectomy (done with or without the assistance of a robot) is an operation that involves the removal of a portion or the entire prostate gland, depending on the stage of the cancer, and requires a hospital stay. Common side effects may include incontinence and impotency.

## EXTERNAL RADIATION

External radiation, sometimes referred to as external beam radiation therapy, uses high-energy X-rays from a machine, directed at the prostate gland. This treatment is an outpatient procedure that is delivered daily over the course of several weeks. In cases of high risk disease, brachytherapy may be used in conjunction with external beam radiation therapy. Common side effects may include incontinence, impotence and bowel irritation.

## HORMONE THERAPY

Androgen Deprivation Therapy (ADT) is when hormones are delivered to lower testosterone (male hormone) levels, which inhibits the growth of cancer cells over time. Depending on patient factors, hormone therapy may be used in conjunction with brachytherapy.

## ACTIVE SURVEILLANCE

During active surveillance, or sometimes referred to as watchful waiting, prostate cancer is carefully monitored for signs of progression. During this period, no additional treatment options are performed.

# BRACHYTHERAPY STRATEGY

## PRE-IMPLANT

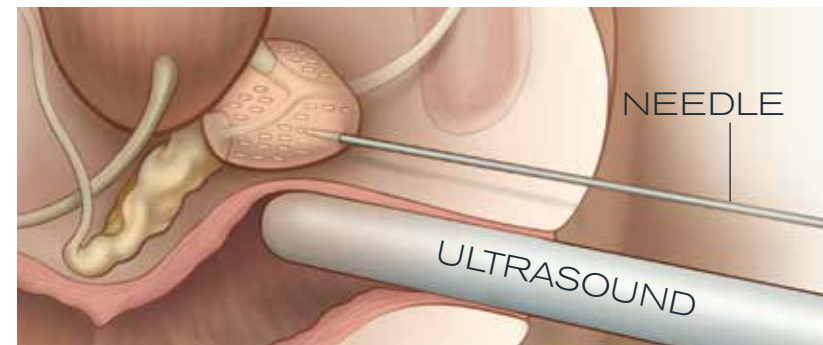
Prior to the brachytherapy procedure, a clinician may schedule a series of pre-operative exams including blood tests and x-rays. An ultrasound exam may also be given to assess the size, shape and specific location of the prostate. The ultrasound exam provides a comprehensive map of the prostate so that the clinician may properly implant the seeds.



## PROCEDURAL OVERVIEW

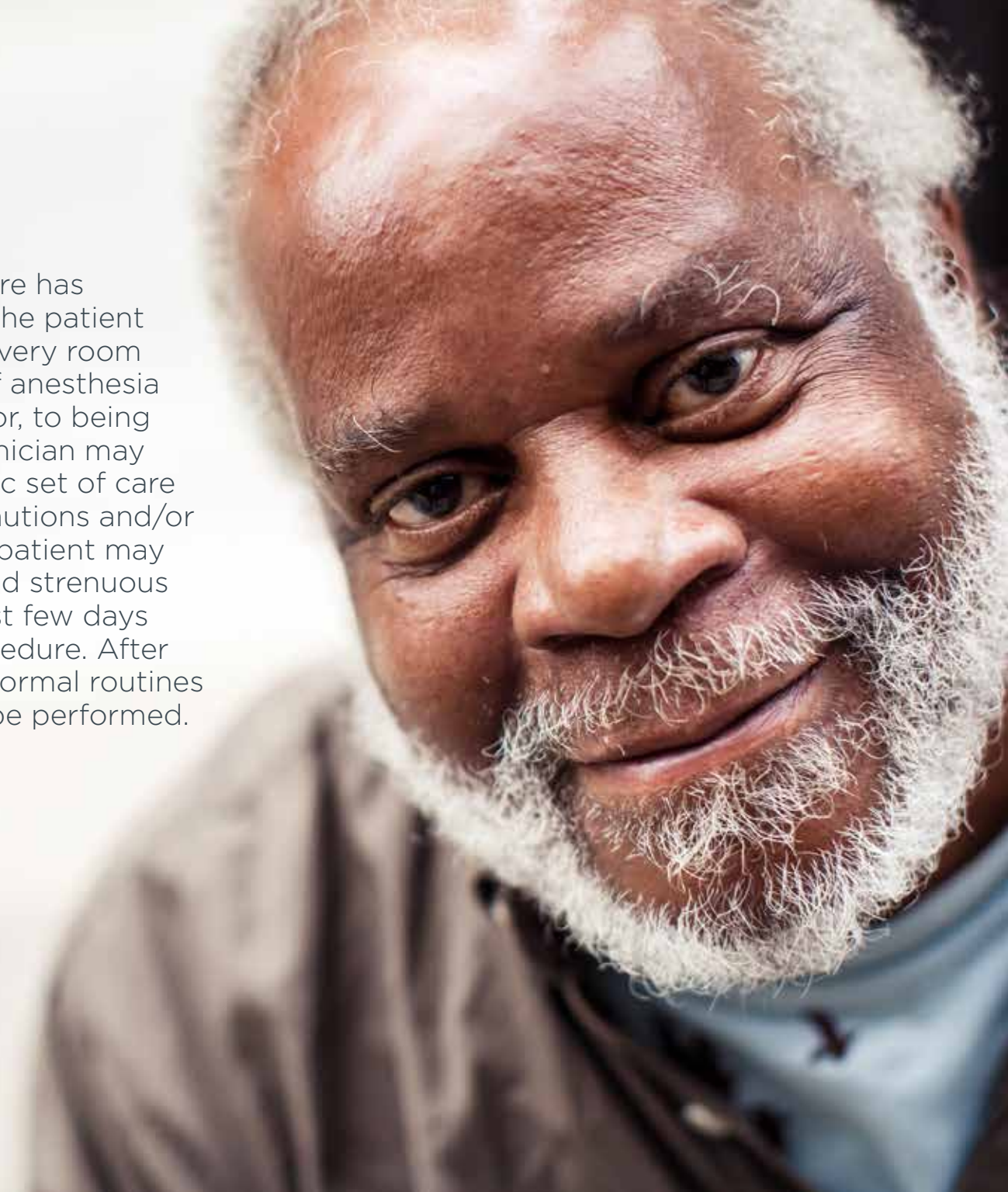
Brachytherapy is typically performed on an outpatient basis and averages 30 minutes to an hour of procedure time. While under general or spinal anesthesia, an ultrasonic probe is inserted into the rectum. This gives the clinician a live picture of the prostate throughout the procedure. Very thin needles are inserted into the perineum (the area of skin between the rectum and scrotum), then the seeds are inserted through the needles and into the prostate treatment site. Cesium-131 seeds are the size of a grain of rice and release a personalized radiation dose over a period of days.

The custom radiation dose and implant plan are developed with precision, dose mapping computer software. This allows effective treatment while minimizing damage to nearby tissue, and thereby limiting side effects. After all seeds have been implanted, the clinician will confirm their location with a final x-ray.



## POST-IMPLANT

Once the procedure has been completed, the patient is sent to the recovery room until the effects of anesthesia have worn off. Prior, to being sent home, the clinician may prescribe a specific set of care instructions, precautions and/or an antibiotic. The patient may be advised to avoid strenuous activity for the first few days following the procedure. After this time period, normal routines and activity may be performed.



# RESOURCES & KEY THINGS TO CONSIDER

WHEN DECIDING ON THE APPROPRIATE TREATMENT OPTION, THERE ARE MANY FACTORS TO CONSIDER. SOME KEY ITEMS:

## SPECIALIST OPINIONS

Consider seeing different specialist (Urologist, Radiation Oncologist, etc.) for multiple opinions and medical direction.

## CLINICIAN EXPERIENCE

Be sure to understand the experience that your clinician has with a chosen procedure. Although a treatment option may be available, another care specialist may have more experience in providing the treatment option.

## SIDE EFFECTS

Gain a clear understanding of the different side effects from each treatment option and duration of said side effects.

## RESOURCES

The following organizations and websites offer additional information on treatment guidelines and options, survival outcomes and recommendations:

Isoray Medical: [isoray.com](http://isoray.com)

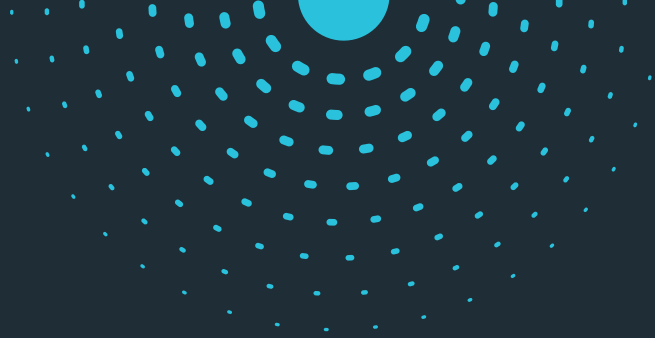
Prostate Cancer Treatment Research Foundation: [pctrf.org](http://pctrf.org)

American Cancer Society: [cancer.org](http://cancer.org)

IF YOU OR A LOVED ONE  
HAS RECENTLY BEEN DIAGNOSED  
WITH PROSTATE CANCER AND WANT  
TO LEARN MORE ABOUT HOW  
CESIUM-131 BRACHYTHERAPY  
MAY IMPROVE PATIENT  
OUTCOMES, EMAIL:  
[PATIENTEDUCATION@ISORAY.COM](mailto:PATIENTEDUCATION@ISORAY.COM)







# BEYOND YOUR CANCER™