PROSTATE CANCER PATIENT GUIDE

Your Comprehensive Resource for Understanding, Treating, and Living with Prostate Cancer



The Urology Group
Advanced Care. Improving Lives.

TABLE OF CONTENTS

Part I: Welcome & Understanding

Welcome to The Urology Group 1

Understanding the Prostate & Prostate Cancer 2

Understanding Your Diagnosis 4

Part II: Testing & Evaluation

Genetic & Genomic Testing 8

Part III: Treatment Options

Active Surveillance 10

Surgery: Robotic-Assisted Prostatectomy 12

Radiation Therapy 14

Alternative Treatment Options 17

Hormone & Systemic Therapy 18

Part IV: Living Well

Nutrition & Lifestyle 20

Monitoring & Recurrence Planning 22

Survivorship 24

Part V: Support & Resources

Navigation & Support Services 26

Resources 27



WELCOME TO THE UROLOGY GROUP

At The Urology Group, we understand that a prostate cancer diagnosis can bring uncertainty, questions, and difficult decisions. This booklet was created to provide you and your loved ones with reliable, easy-to-understand information about your diagnosis, treatment options, and the many resources available to support you throughout this journey.

We believe that informed patients make the best partners in care. That's why we are committed not only to offering advanced clinical expertise, but also to ensuring that you have the knowledge, tools, and guidance to feel confident in your decisions.

About The Urology Group

The Urology Group is one of the largest independent urology practices in the region, serving patients across Greater Cincinnati, Northern Kentucky, and Southeast Indiana. We are proud to be part of the nation's leading network of independent urology groups. This affiliation enhances our access to national clinical resources, medical thought leaders, and cutting-edge innovations in urological care—while allowing us to maintain the personalized approach our patients value.

Our integrated team of board-certified urologists, radiation oncologists, advanced practice practitioners (APPs), and support staff provides comprehensive, evidence-based care from diagnosis through survivorship. Your treatment plan will reflect your unique diagnosis, goals, and overall health. Whether you are considering active surveillance, surgery, radiation, or a combination of therapies, we are here to help you make informed decisions that are right for you.

We're honored to be your trusted partner in care every step of the way.

For additional information and digital resources, please visit urologygroup.com.

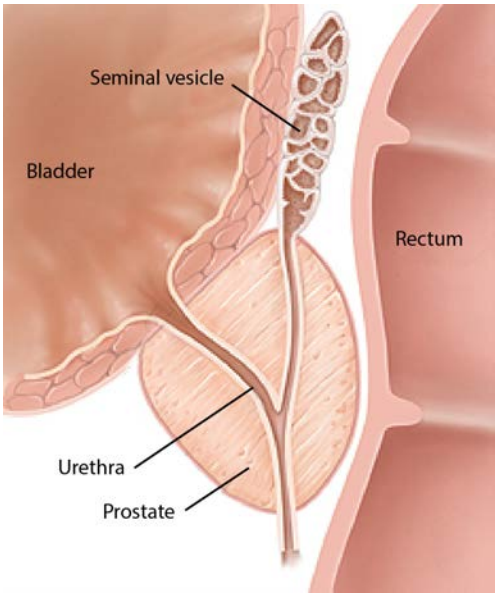
UNDERSTANDING THE PROSTATE GLAND & PROSTATE CANCER

Understanding the Prostate Gland

The prostate is a small gland found only in men. It's part of the male reproductive system and is located just below the bladder and in front of the rectum. The urethra, a tube that carries urine and semen out of the body, passes through the center of the prostate.

The prostate's main job is to produce a fluid that helps make semen. This fluid mixes with sperm from the testicles and fluid from nearby glands called the seminal vesicles. Together, this combination supports and protects sperm during ejaculation.

In younger men, the prostate is about the size of a walnut. As men age, the prostate often becomes larger. This change is common and doesn't always cause problems, but sometimes it does.



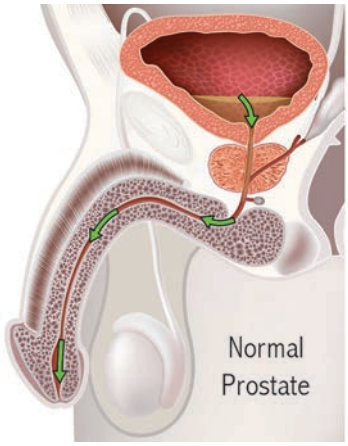
What is Benign Prostatic Hyperplasia (BPH)?

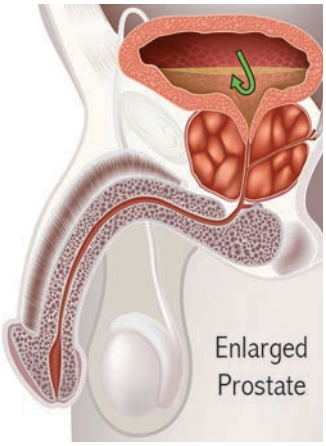
Benign prostatic hyperplasia (BPH) is a non-cancerous enlargement of the prostate gland. It is not cancer and does not lead to cancer. However, as the prostate grows, it can press against the urethra and make it harder to pass urine.

Common BPH symptoms include:

- A weak urine stream
- Trouble starting or stopping urination
- A feeling of not fully emptying the bladder
- Needing to urinate more often, especially at night

BPH is very common as men get older. By age 60, about half of all men will have some symptoms of BPH.





How BPH Differs from Prostate Cancer

While BPH involves an enlarged prostate, prostate cancer is a very different condition. Doctors can tell the difference between BPH and prostate cancer using a combination of tests, including a digital rectal exam (DRE), a PSA blood test, and, if needed, a prostate biopsy.

What is Prostate Cancer?

Prostate cancer starts when cells in the prostate begin to grow out of control. These cancer cells are different from normal cells because they don't stop growing. Many cancer cells cannot be felt during a physical exam and are found during an MRI or biopsy. The cells eventually form a lump (tumor), grow into nearby tissues, and sometimes spread to other parts of the body, most often the bones or lymph nodes.

Most prostate cancers grow slowly, but some can be aggressive and spread quickly. Many men with prostate cancer live for many years, especially when the cancer is found early.

Most prostate cancers are a type called adenocarcinoma, which begins in the cells that make prostate fluid. This type makes up about 95% of all prostate cancers.

Early prostate cancer often causes no symptoms. That's why regular screening with PSA blood tests can help find prostate cancer early, when it's most treatable.

Risk Factors

Even after a diagnosis, understanding what may have contributed to prostate cancer can be helpful.

Key risk factors include:

- **Age:** Prostate cancer is rare in men under 40, but the chance of having it rises significantly after age 50.
- **Race:** Black men are at greater risk of developing prostate cancer, and often at younger ages or with more aggressive tumors.
- **Family History:** Having a father, brother, or close relative with prostate cancer, especially at a younger age, raises your risk.
- **Obesity:** Being significantly overweight may be linked with a higher chance of having a more aggressive cancer.
- **Diet and Lifestyle:** Though not directly proven to prevent prostate cancer, eating a balanced diet and staying physically active is associated with better health outcomes overall.



UNDERSTANDING YOUR DIAGNOSIS

If you have recently been diagnosed with prostate cancer, the news can feel overwhelming. You may have many questions about what your results mean and what comes next. This section explains how prostate cancer is evaluated after diagnosis, how aggressive the disease may be, and how doctors determine the most appropriate next steps for your care.

What the Biopsy Tells Us

A prostate biopsy is a procedure that takes small tissue samples from your prostate. These samples are reviewed by a pathologist, who determines whether cancer is present and, if so, how aggressive it looks under the microscope.

If prostate cancer is found, it is assigned a Gleason score. This score is one of the most important tools for understanding the behavior of your cancer.

Understanding the Gleason Score & Grade Groups

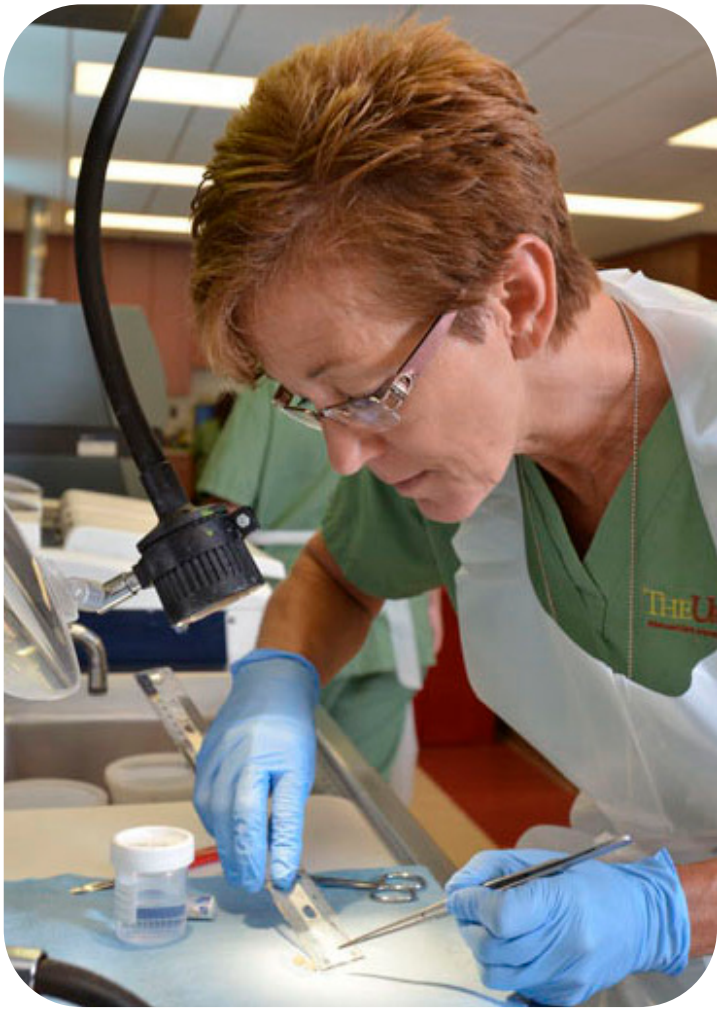
The Gleason score describes how much the prostate cancer cells differ from normal prostate cells. Two patterns of cancer are graded from 1 (most like normal cells) to 5 (most abnormal), and the scores are added together.

Only scores of 6 through 10 are reported on prostate biopsies:

- **Gleason 6 (3+3):** Cancer cells look slightly abnormal.
- **Gleason 7 (3+4 or 4+3):** Cancer is moderately abnormal. 3+4 is less aggressive than 4+3.
- **Gleason 8–10:** Cancer cells are very abnormal and often grow and spread more quickly.

To simplify communication, these scores are also grouped into Grades:

Gleason Score	Grade Group
Gleason 6	1
Gleason 3+4=7	2
Gleason 4+3=7	3
Gleason 8	4
Gleason 9–10	5



Your Risk Group

After diagnosis, your care team will place your cancer into a risk group using several key factors:

- PSA level at diagnosis
- Grade Group (Gleason score)
- Clinical stage (based on exam or imaging)
- Number and extent of biopsy cores involved
- Percent of cancer in each core

These risk groups, based on National Comprehensive Cancer Network (NCCN) guidelines, are:

Risk Group	Key Features
Very Low Risk	T1c, PSA <10, Grade Group 1, <3 positive cores, ≤50% cancer in any core, PSA density <0.15
Low Risk	T1–T2a, PSA <10, Grade Group 1
Favorable Intermediate	T1–T2b, PSA 10–20 or Grade Group 2, AND ≤50% positive cores
Unfavorable Intermediate	T2c or Grade Group 3 or >50% positive biopsy cores
High Risk	T3a, PSA >20, or Grade Group 4 or 5
Very High Risk	T3b–T4, primary Gleason pattern 5, or >4 biopsy cores with Grade Group 4 or 5

Imaging: What's Needed and Why

Based on your risk group, your doctor may recommend imaging to look for cancer outside the prostate.

- **MRI (mpMRI):** Sometimes used before or after biopsy to assess suspicious areas or guide treatment. It can show if the cancer is near the edge or has possibly spread outside the prostate.
- **Bone Scan and CT Scan:** These are traditional tools to determine if cancer has spread to bones or lymph nodes. They may be used for high- and very high-risk patients.
- **PSMA PET Scan:** This is a newer, highly sensitive scan that can detect prostate cancer cells even when PSA is low. It is especially helpful for unfavorable intermediate-risk or higher patients and is becoming a preferred tool for staging and recurrence monitoring.



UNDERSTANDING YOUR DIAGNOSIS

Genomic & Molecular Testing

In certain cases, your doctor may recommend gene expression testing to provide more information about how aggressive your cancer may be. These are not genes that you inherited from your parents but rather the tumor biology that the cancer acquires over time.

- Tests such as Decipher, Oncotype DX, and Prolaris analyze the genes that have changed within the cancer that was found in your biopsy tissue.
- These tests help refine risk assessments and guide treatment decisions—especially when you're considering active surveillance vs. treatment.

Artera AI is a newer genomic platform that uses artificial intelligence to predict both the risk of cancer progression and how likely you are to benefit from radiation therapy or hormone therapy. It combines genomic data with clinical features to support more personalized decisions.

Treatment Overview

Facing prostate cancer can feel overwhelming, especially when there are several treatment options to consider. The good news is that you are not alone. Your healthcare team is here to help you make the best decision based on your cancer, your health, and your personal values.

Shared Decision-Making: You Are the Center of the Process

At The Urology Group, we believe in shared decision-making. That means we don't just tell you what to do. We work with you to explore your options, answer your questions, and guide you through each step.

We know that every patient is different. Some men prefer a treatment that is fast and aggressive. Others want to avoid certain side effects. Some may want to wait and monitor the cancer over time. There is no one-size-fits-all answer, and that's okay.

Our job is to give you the information, tools, and support to help you choose the treatment that feels right for you.

How We Help You Decide

You will meet with your urologist and, if needed, other specialists such as radiation oncologists or medical oncologists. Together, we will:

- Explain your diagnosis in plain language
- Review your PSA, Gleason score, imaging, and risk group
- Talk through each treatment option and what it might mean for your health and lifestyle
- Discuss possible side effects and how to manage them
- Answer your questions clearly and completely
- Support your personal goals and preferences

We encourage you to include your spouse, partner, family, or friends in your decision-making process. It's okay to take time to think, ask questions, and talk things over.



GENETIC & GENOMIC TESTING

Understanding Your Cancer at the DNA Level

Prostate cancer can sometimes run in families. In some men, changes in certain genes, either inherited or picked up in the tumor, can affect how the cancer grows and how it responds to treatment. Genetic and genomic testing helps to guide treatment, predict risk, and support family members who may also be at risk.

Types of Testing: Germline vs. Somatic

Germline testing looks at DNA you were born with, otherwise known as "heritable" genes. These changes can be passed down from your parents and may run in families.

- Examples of heritable genes: BRCA1, BRCA2, ATM, CHEK2, PALB2
- If a germline mutation is found, your family members may also want to get tested

Somatic testing looks at DNA changes in the cancer itself (not inherited). These can guide treatment decisions, especially in advanced cases.

- Examples of DNA changes: BRCA mutations, CDK12, MSI-H, PTEN loss



Germline Testing

- Looks for inherited mutations within the germline
- Requires a saliva, blood, or cheek swab sample
- Mutations are hereditary and may be passed on to children



Somatic Testing

- Looks for acquired mutations within the cancer
- Requires a sample of the tumor
- Mutations are not hereditary

Who Should Be Tested?

Genetic and genomic testing may be recommended for:

- Men with prostate cancer that has spread to other parts of the body (metastatic)
- Men with high-risk or very high-risk prostate cancer
- Men whose cancer has come back or is not responding to treatment
- Men with a strong family history of prostate, breast, ovarian, or pancreatic cancer

How Results Affect Treatment

- Some gene changes, like BRCA1 or BRCA2, may mean you can take special drugs called PARP inhibitors (like olaparib or rucaparib).
- Other gene changes may show your cancer responds better to hormone treatment or immunotherapy.
- If a germline mutation is found, your family members may also want to get tested to learn about their own risk.

What to Expect from Testing

- Your doctor or nurse navigator will talk to you about the testing.
- Testing is done through a blood sample, saliva, or a piece of tumor tissue.
- Results usually come back in 2-4 weeks.
- A genetic counselor may help you understand the results and what they mean for you and your family.

Common Questions

Does genetic testing mean I'll get more cancer? No. It helps us understand how to treat your current cancer and what risks you or your family may have.

Will my insurance cover testing? Most insurance plans cover testing for men with prostate cancer who meet guidelines. Our team will help check your coverage.

Is this the same as 23andMe or ancestry tests? No. This is medical testing done through certified labs and reviewed by cancer specialists.



ACTIVE SURVEILLANCE

Active surveillance means monitoring prostate cancer closely instead of treating it right away. It's a safe and evidence-based option for many men whose cancer is unlikely to grow or spread quickly. The goal is to avoid or delay treatment-related side effects while still keeping cancer under control.

Who Is a Candidate for Active Surveillance?

Based on National Comprehensive Cancer Network (NCCN) guidelines, active surveillance is appropriate for men with:

- Very Low-Risk Disease
- Low-Risk Disease
- Select men with Favorable Intermediate-Risk Disease (typically those with only one intermediate-risk feature and limited cancer volume)

Your doctor will use PSA levels, clinical stage, Gleason Grade Group, the number of positive biopsy cores, the percentage of cancer found in each core, and PSA density to determine your risk group. In favorable cases, surveillance can safely postpone or even avoid the need for treatment.

Active Surveillance in Men with Limited Life Expectancy

Some men have other serious health issues or are older and less likely to benefit from curative treatments like surgery or radiation. In these cases, active surveillance, or watchful waiting, may be the most appropriate plan.

These decisions are made with sensitivity. If treatment is unlikely to improve quality or length of life, it may be better to focus on monitoring and comfort. If the cancer progresses, hormone therapy can often help control it.

What Does Active Surveillance Involve?

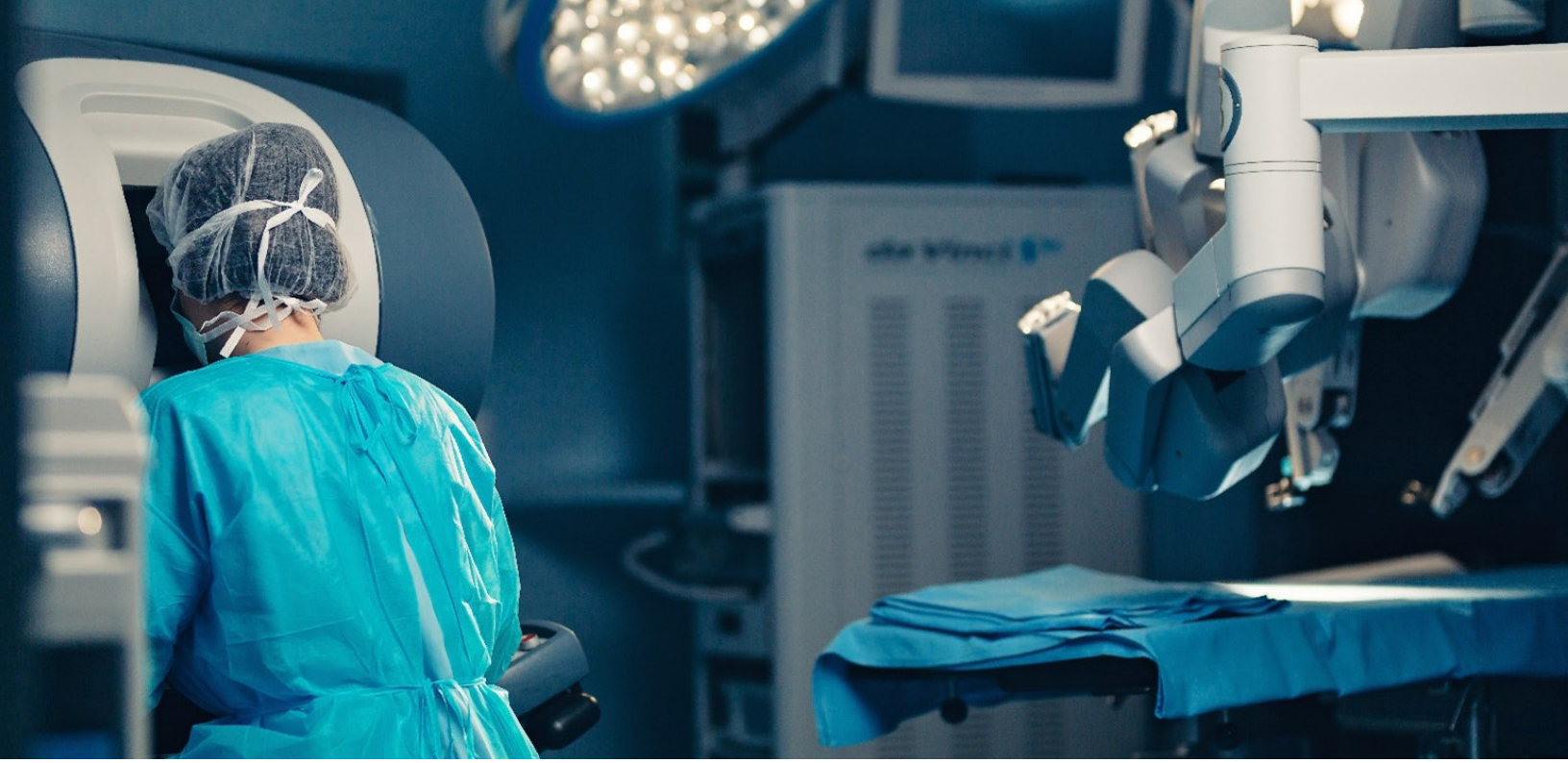
Active surveillance includes regular follow-up visits to monitor for any signs that the cancer is changing:

- PSA testing every 6 to 12 months
- mpMRI within the first 3 to 9 months if not already done
- Repeat prostate biopsy and/or MRI within 6 to 12 months, then every 1 to 3 years
- Genomic testing on the biopsy specimen may help assess the risk of aggressive disease: common tests include Decipher®, Oncotype DX®, and Prolaris®
- Shared decision making between you and your doctor to align your care plan with your goals

What Should I Expect?

- About 70-75% of men on active surveillance will not need treatment in the first 5 years.
- If the cancer progresses, treatment is usually still very effective when started at that point.
- Studies show similar long-term survival for men on active surveillance compared to those who choose immediate treatment if they are properly monitored.





SURGERY: ROBOTIC-ASSISTED PROSTATECTOMY

Robotic-assisted radical prostatectomy is a modern surgical approach used to remove the prostate gland and seminal vesicles with the goal of curing prostate cancer. The most common system used today is the da Vinci® robot, which allows the surgeon to operate through small incisions in the lower abdomen using robotic instruments and a high-definition camera.

The Procedure

During the procedure:

- The prostate and seminal vesicals are removed.
- The bladder is reattached to the urethra.
- At times, pelvic lymph nodes are removed.
- A catheter is placed to allow healing and is typically removed in the office about one week later.



Benefits of Robotic Surgery

This minimally invasive approach offers several benefits:

- Smaller incisions
- Reduced blood loss
- Decreased need for pain medication
- Shorter recovery time

Most patients are discharged the same day or the day after surgery, depending on individual health status and surgeon preference.

Side Effects

Like any surgery, robotic prostatectomy comes with risks. The most common side effects include:

Urinary incontinence

This refers to leakage of urine, which is common in the early recovery period. Most men gradually recover bladder control within 2-6 months. Pelvic floor strengthening (Kegel exercises) can help.

Erectile dysfunction (ED)

Most men experience some degree of ED after surgery but rehabilitation strategies and treatments are available that help improve function overtime. Recovery can take months to over two years. Oral medications (like Viagra or Cialis) and other therapies are often used as part of "penile rehabilitation."

The nerves responsible for erections run very close to the prostate and may be affected during surgery. When nerve-sparing techniques are used:

- 70-80% of men may recover the ability to have erections adequate for intercourse over time
- Recovery can take months to over two years. Oral medications (like Viagra or Cialis) and other therapies are often used as part of "penile rehabilitation"

Loss of ejaculation

After the prostate and seminal vesicles are removed, men no longer ejaculate semen. However, the sensation of climax often remains.

Bowel side effects are rare, and serious complications such as rectal injury are very uncommon.

Activity Restrictions After Surgery

- Avoid heavy lifting (over 20 pounds) for at least 6 weeks.
- Walking and light activity are encouraged immediately after surgery.
- Avoid strenuous activity, abdominal exercises, or cycling for 6 weeks.
- Refrain from driving while the catheter is in place or while taking narcotic pain medication.
- While it is okay to perform Kegels before surgery, avoid Kegels in the first 6 weeks after surgery.

Recovery and Follow-Up

- A post-operative visit is typically scheduled 1-2 weeks after surgery for catheter removal and to review the pathology report.
- PSA blood tests begin 6-12 weeks after surgery and continue at regular intervals to monitor for recurrence.
- Long-term follow-up is important, and most men are monitored with PSA tests every 3-6 months for the first few years.
- Typically you can drive within 1-2 weeks after surgery.

RADIATION THERAPY

Introduction to Radiation Therapy

Radiation therapy is a way to treat prostate cancer using high-energy beams. These beams damage the cancer cells and stop them from growing or spreading. Radiation can be used to try to cure the cancer or to slow it down, especially when surgery isn't the best choice. Radiation is non-invasive, meaning there are no cuts or stitches. It is often done as an outpatient treatment so you go home the same day.

There are different types of radiation. Some are given from outside the body, like external beam radiation. Others, like brachytherapy, are given from inside the body using tiny radioactive seeds. Your doctor will help choose the best type of radiation based on your cancer, your health, and your preferences.

Adaptive Radiation Therapy (ART) with Ethos™

At The Urology Group, we offer Adaptive Radiation Therapy (ART) using the Ethos™ system. Unlike traditional methods that use a single plan for your entire treatment, Ethos adapts your plan each day, if needed, using advanced imaging and artificial intelligence. This allows for highly personalized treatment whether you are receiving Intensity-Modulated Radiation Therapy (IMRT) or Stereotactic Body Radiation Therapy (SBRT). It is a highly advanced technology that adapts your plan daily using artificial intelligence.



The technology can recalculate your radiation treatment plan, prior to each treatment if needed, to ensure the cancer is being targeted appropriately all the while minimizing radiation dose to adjacent organs such as your bladder and rectum.

Here's what to expect:

1. You'll come in for your treatment.
2. A CT scan is done to evaluate how your organs are aligned that day compared to the original plan.
3. The system updates the outlines of your prostate, bladder, rectum, and other nearby organs.
4. If needed, a new treatment plan is created and approved by your doctor.
5. You receive treatment—all in about 20–25 minutes.

This daily adaptation helps ensure that the radiation is tightly focused on the prostate, even if your anatomy changes from day to day. It means less radiation to healthy organs, better accuracy, and the potential for fewer side effects.

Benefits of ART include:

- Daily personalization of your treatment plan
- Better protection for healthy tissues such as the bladder and rectum
- Improved precision and potentially fewer side effects
- Flexibility to use with both SBRT and IMRT
- No surgery or hospital stay required

ART also uses smart computer software to speed up the planning process. What used to take hours of planning can now be done in minutes, so patients can be treated safely.

Why ART Matters

- Adjusts treatment daily for your anatomy
- Works with both SBRT and IMRT
- Minimizes radiation to bladder and rectum
- Improves accuracy without extra procedures or the delay required with replanning

Stereotactic Body Radiation Therapy (SBRT)

SBRT is a type of radiation that delivers a few, very focused high-dose treatments. Most men receive 5 sessions over 1–2 weeks. SBRT is often used for patients with localized prostate cancer and can be an alternative to longer courses of radiation. When combined with ART, SBRT can be adjusted daily to keep the treatment as precise as possible.

Common benefits of SBRT:

- Short overall treatment time (1–2 weeks)
- Very precise targeting of the prostate
- Convenient

External Beam Radiation (IMRT/IGRT)

IMRT is a common type of external beam radiation that shapes the beams to fit the prostate and protect nearby organs. With Image-Guided Radiation Therapy (IGRT), a scan is taken before each session to line things up correctly. Unlike ART, the plan usually stays the same each day. IMRT is often used when a larger area needs to be treated, or after surgery when the prostate has been removed. Treatments are usually given 5 days a week for 6 to 9 weeks.

Common side effects include:

- Feeling tired
- Needing to urinate more often
- Mild bowel changes

Most side effects are temporary and improve after treatment is complete.

Rectal Spacers

Since the prostate and rectum are nearly touching each other, a rectal spacer is often used to create a physical separation, or "space," between these organs to reduce the radiation exposure to the rectum and other normal tissues.

A rectal spacer is a temporary device placed between the prostate and rectum prior to radiation planning during a one-time, 15- to 30-minute outpatient procedure. These spacers have been shown to minimize short-term side effects such as bowel urgency, bleeding, or irritation.

Common types of rectal spacers include:

- SpaceOAR™ Hydrogel
- Barrigel®
- BioProtect™ Rectal Balloon Spacer

The spacer remains in place throughout your treatment, naturally dissolving or being absorbed by the body over time.

Your doctor will discuss whether a rectal spacer is right for you as part of your personalized treatment plan.

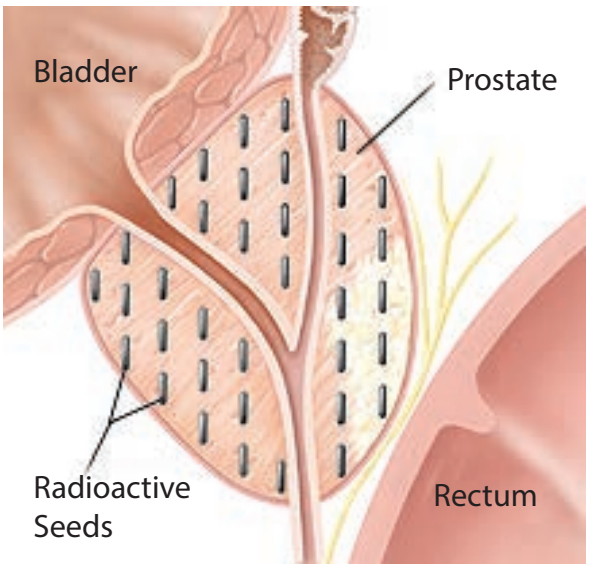
Brachytherapy (Seed Implants)

Brachytherapy is a type of radiation where tiny seeds are placed directly into the prostate. These seeds give off radiation slowly over time. This treatment is often used for men with low or intermediate-risk prostate cancer and in some men with high-risk disease in combination with IMRT.

The procedure is done under anesthesia at our center and most patients go home the same day. The seeds stay in your body, but the radiation decays over several months.

What to expect:

- A planning ultrasound is done first to map the prostate.
- Intraoperative planning is done to determine the location of the seeds.
- The doctor places the seeds using a needle and ultrasound.
- The treatment is completed.



You may be asked to avoid close contact with young children or pregnant women for a short time. You can still sleep in the same bed as your partner.

Benefits of brachytherapy include:

- One-time treatment
- Quick recovery
- High success rate for early-stage cancers

ALTERNATIVE TREATMENT OPTIONS

Cryotherapy (Freezing Therapy)



Cryotherapy, also known as cryosurgery or cryoablation, is a treatment that uses extreme cold to destroy prostate cancer cells. Thin probes are inserted through the skin beneath the scrotum into the prostate, and cycles of freezing and thawing are used to destroy the tissue.

- **Outpatient procedure:** Typically performed under general anesthesia and lasts 1-3 hours
- **Post-procedure care:** A urinary catheter is placed and usually removed within 1-2 weeks

Primary Treatment

Cryotherapy may be considered for select patients with localized prostate cancer who are seeking a non-surgical, non-radiation-based option. While not used as commonly as surgery or radiation, it remains an option for men who are not ideal candidates for other treatments or prefer a minimally invasive approach.

Salvage Treatment

Cryotherapy is more commonly used in the salvage setting, meaning if the cancer returns after prior radiation therapy. In this context, cryotherapy can provide a second chance at cure while avoiding the complexity of post-radiation surgery. Your doctor may recommend this option depending on your cancer status, imaging, and PSA results.

Proton Therapy

Proton therapy is a form of external beam radiation that uses proton particles to destroy cancer cells, as opposed to photon energy, which is used in SBRT and IMRT. Protons release the majority of their radiation dose at a specific depth (the “Bragg peak”), which may reduce radiation exposure to surrounding tissues.

While proton therapy has theoretical benefits, studies to date have not shown improved cure rates or fewer side effects compared to advanced photon-based techniques. Proton therapy is expensive, requires specialized centers, and is not always covered by insurance.

High-Intensity Focused Ultrasound (HIFU)

HIFU is a noninvasive treatment that uses high-frequency ultrasound waves to generate precise heat within the prostate, destroying cancer cells. The energy is delivered through a probe placed in the rectum, and the procedure is typically performed under anesthesia in an outpatient setting.

- **Procedure time:** 1-3 hours
- **Post-treatment:** A urinary catheter may be left in place for 1-2 weeks

When is HIFU Used?

HIFU may be used as a primary treatment for select patients with localized prostate cancer, especially those with favorable disease characteristics. It can also be considered in salvage settings following prior radiation therapy and has been used to treat focal areas of recurrent cancer.

While long-term outcomes are still being studied, HIFU is FDA-approved in the U.S. for destroying prostate tissue and may offer a tissue-sparing approach with fewer side effects in some patients.

Chemotherapy

Chemotherapy is a type of cancer treatment that uses drugs to kill or slow down the growth of cancer cells. Chemo isn't standard treatment for early-stage prostate cancer, but it is sometimes recommended if the cancer has spread beyond the prostate gland. It may be used along with hormone therapy. It can be injected into a vein or taken in pill form.

HORMONE & SYSTEMIC THERAPY

What Is Hormone Therapy?

Prostate cancer grows in response to a male hormone called testosterone. Hormone therapy is a way to lower the amount of testosterone in the body or block its effect on cancer cells. This slows down the growth of prostate cancer, and in many cases, shrinks the tumor or stops it from spreading.

Hormone therapy is often used when cancer is high-risk, has come back after treatment, or has spread to other parts of the body.

Who Needs Hormone or Systemic Treatment?

Not every man with prostate cancer needs hormone therapy. It is used most often in these situations:

- Men with high-risk or very high-risk prostate cancer, before or during radiation therapy
- Men whose cancer has come back after surgery or radiation
- Men whose cancer has spread outside the prostate (metastatic prostate cancer)

These treatments help slow the cancer and improve quality of life, even if they don't always cure the disease.

Types of Hormone & Systemic Therapies

There are several kinds of hormone and systemic therapies. Some are given as injections and others are pills you take by mouth.

1. LHRH Agonists and Antagonists

These medications lower testosterone by interrupting the signals from the brain to the testicles, which stops the body from making testosterone. They are typically given as injections on a regular schedule — every 1, 3, 4, or 6 months depending on the medication and patient needs.

Common injectable ADT options include:

- Leuprolide (Lupron®)
- Leuprolide (Eligard®)
- Leuprolide gel (Camcevi®)
- Triptorelin (Trelstar®)
- Degarelix (Firmagon®)

There is also an oral option called relugolix (Orgovyx®). This pill is taken once daily and works similarly to the injections. We often use Orgovyx for several reasons: it starts working quickly, does not cause the initial testosterone surge that some injections do, and it clears from the body faster if the medication needs to be stopped. Orgovyx may also be a good option for patients who prefer pills over injections. The testosterone recovery after stopping the medication can be quicker than other options. This is beneficial for the patient who needs a shorter treatment course.

2. Oral Anti-Androgens

These pills block testosterone from feeding the cancer cells. They are often used with or after LHRH therapy.

- Abiraterone (Zytiga®): Blocks an enzyme needed to make testosterone; taken with a steroid to reduce side effects
- Enzalutamide (Xtandi®): Blocks the action of testosterone inside the cancer cells
- Apalutamide (Erleada®): Similar to enzalutamide, often used for men with non-spreading but high-risk disease
- Darolutamide (Nubeqa®): A newer option with fewer side effects on the brain and nerves

3. PARP Inhibitors

PARP inhibitors are used for men with specific inherited gene mutations, like BRCA1 or BRCA2. They block a repair process in cancer cells, making it harder for the cancer to survive. These medicines include olaparib (Lynparza®) and rucaparib (Rubraca®). They are sometimes used with oral hormone therapy for advanced prostate cancer.

Common Treatment Combinations

- Hormone injections (like Lupron®) plus a pill such as enzalutamide, apalutamide, or abiraterone
- For men with genetic mutations, a PARP inhibitor may be added to hormone pills

These combinations are based on how far the cancer has spread and the patient's overall health.

Bone Health & Monitoring

Lowering testosterone over time can weaken the bones. Men on long-term hormone therapy (ADT) are at increased risk for osteoporosis and fractures, so it is very important to take steps to protect bone health.

- All men starting ADT should get a bone density scan (DEXA) before or soon after beginning therapy.
- DEXA scans should be repeated about every 2 years to monitor bone strength.
- Take calcium (1,000–1,200 mg per day) and vitamin D (800–1,000 IU per day) unless otherwise directed by your doctor.
- Weight-bearing exercise, such as walking, stair climbing, or resistance training, helps strengthen bones by increasing the load on them.
- Some men may benefit from medications like zoledronic acid (Reclast®) or denosumab (Prolia®/Jubbonti®) to strengthen bones, especially if they have osteoporosis or are at high risk for fractures.
- For men whose cancer has spread to the bones, treatment with denosumab (Xgeva®/Wyost®) or zoledronic acid (Zometa®)—bone-strengthening injections used to help protect bone strength and reduce the risk of painful skeletal complications—may be recommended.

Side Effects & What to Expect

Hormone and systemic therapy are powerful tools, but they can cause side effects. Not every man will have them, and some are temporary.

Common side effects include:

- Fatigue
- Weight gain
- Hot flashes or night sweats
- Lower sex drive or erectile problems
- Mood changes
- Bone thinning

Oral therapies may have their own side effects, like high blood pressure, liver changes, or upset stomach. Always talk to your doctor if something feels off.

NUTRITION & LIFESTYLE

Recent research shows that men with prostate cancer who follow a healthy lifestyle, including regular exercise, a plant-forward diet, and avoid smoking, live longer. In a 2025 study of over 2,600 men, those with the healthiest habits reduced their risk of dying from any cause by up to 47%. Even simple changes, like eating more vegetables or walking daily, can improve your energy and long-term health.

Nutrition: Fuel for Recovery and Wellness

Eating well is one of the most important things you can do during and after cancer treatment. A diet focused on whole foods can help reduce inflammation, support your immune system, and maintain your strength.

Key dietary tips:

- Eat more plants: fruits, vegetables, beans, and whole grains
- Choose healthy fats like olive oil, nuts, and avocados
- Limit red and processed meats
- Stay hydrated with water

Research shows that diets rich in plant-based foods or following the Healthy Eating Index are linked to a 25-26% lower risk of death in men with prostate cancer. Download this free cookbook for lots of healthy ideas: urologyhealth.org/educational-resources/urologic-cancer-cookbook

Exercise: Movement with a Purpose

Exercise is safe and often encouraged during prostate cancer treatment. It helps boost energy, reduce treatment-related fatigue, support bone and muscle strength, and improve overall well-being.

Suggested activities:

- Aerobic exercise (e.g., walking, biking) for 150 minutes/week
- Strength training 2-3 times/week
- Stretching or yoga for flexibility and stress relief

Talk to your doctor before beginning a new exercise program.



Lifestyle and Longevity

The 2025 study found that lifestyle had a greater impact on overall and heart-related survival than on prostate cancer-specific deaths. In fact, 85% of deaths among men with prostate cancer were from other causes like heart disease. This means your everyday choices like staying active, avoiding tobacco, and maintaining a healthy weight can make a big difference.

Supplements: Use with Caution

Many supplements are not tested for safety or effectiveness. Some may even be harmful. High-dose vitamin E, B vitamins, and zinc may increase risks, including cancer growth or bleeding. Fish oils and gingko biloba can also increase bleeding risk and are not recommended before surgery. Always talk with your doctor before taking any supplements.

Support for Healthy Changes

You're not alone in making healthy changes. Your care team can connect you with exercise programs and supportive resources. Small steps, like adding one more vegetable per meal or walking 10 minutes daily, can go a long way.

MONITORING & RECURRENCE PLANNING

After treatment for prostate cancer, ongoing monitoring is essential to track your progress and detect any signs of recurrence early. Your care team will use PSA tests and, if needed, imaging to guide your follow-up plan.

PSA Surveillance Timelines

PSA (prostate-specific antigen) is a protein made by prostate cells. It is one of the most important tools for monitoring prostate cancer after treatment. The frequency and interpretation of PSA tests depend on the treatment you received.

After Surgery (Prostatectomy)

PSA is checked 6-12 weeks after surgery. It should drop to an undetectable level (typically <0.1 ng/mL). PSA is then monitored every 6-12 months for the first 5 years, and annually thereafter. A PSA level ≥0.2 ng/mL confirmed by a second test is considered a biochemical recurrence.

After Radiation Therapy

PSA decreases gradually, often over 12-24 months. Recurrence after radiation is defined as a PSA rise of 2.0 ng/mL above the lowest level (the “nadir”). PSA is typically monitored every 6 months for 5 years, then annually.

After Hormone Therapy

PSA is checked at regular intervals, especially if hormone therapy is used alone or with radiation. Your doctor will monitor trends to assess cancer control.



What a Rising PSA May Mean

A rising PSA doesn’t always mean your cancer has returned, but it can be an early sign of recurrence or progression. Your doctor may order imaging tests to investigate:

- **PSMA PET scan:** Highly sensitive and often the most accurate test for detecting prostate cancer recurrence
- **MRI:** Can evaluate the prostate or prostate bed, particularly after radiation therapy
- **Bone scan or CT scan:** Sometimes used to assess for cancer spread, especially in higher-risk cases



When Treatment Isn't Effective

If your prostate cancer returns after initial treatment, there are several options that may still lead to cure or long-term control.

If You Had Surgery First

Radiation Therapy (IMRT or SBRT): Radiation can be used to target the area where the prostate was removed, especially if imaging shows no distant spread. This is most effective when started early, before the PSA rises too high.

If You Had Radiation Therapy First

Prostatectomy: Surgery after radiation is rarely done due to a higher risk of side effects but may be considered in select cases.

SBRT (Stereotactic Body Radiation Therapy): A highly targeted, outpatient radiation option that can re-treat the prostate or surrounding tissues if cancer is still localized.

Cryotherapy: Uses extreme cold to destroy prostate tissue and may be used when cancer recurs in or near the prostate.

Seed Implant "Boost": Additional radioactive seeds may be implanted to deliver more radiation locally.

If Cancer Has Spread (Metastatic Disease)

SBRT for Oligometastatic Disease: SBRT can be used to treat a small number of metastases (typically 1–5 spots), called oligometastatic disease. This approach may delay the need for long-term hormone therapy and can control isolated areas of spread with minimal side effects.

Hormone Therapy: Androgen deprivation therapy (ADT) is used to lower testosterone, slowing cancer growth throughout the body.

Other systemic treatments may be recommended depending on the extent of disease and prior treatments.

SURVIVORSHIP

Living with or beyond prostate cancer means adjusting to changes in your body and lifestyle. Whether your treatment is complete or ongoing, survivorship is about focusing on your quality of life – physically, emotionally, and socially.

Follow-Up Care

Ongoing care is essential, even after treatment is complete. Your follow-up may include:

- PSA testing to monitor for recurrence
- Imaging, if needed
- Conversations about symptoms or side effects

If anything changes with your health including urinary habits, energy levels, or sexual function, tell your doctor. There are always options to help.

Urinary Incontinence

Urinary incontinence, or the involuntary leakage of urine, can occur after prostate cancer treatment, most commonly after surgery, and less frequently after radiation. For many men, incontinence is short-term and improves with time.

- After robotic prostatectomy, 85–90% of men regain full urinary control, typically within 3 to 6 months.
- After radiation therapy, fewer than 5% of men experience significant long-term leakage. Some men may have mild urgency or frequency, which often improves.

If incontinence does occur, we want to reassure you: it is treatable, and help is available.

Types of Incontinence

- Stress incontinence: Leakage with coughing, sneezing, laughing, or lifting
- Urge incontinence: Sudden strong urge to urinate
- Mixed incontinence: A combination of both types

Treatment Options for Incontinence

- Pelvic floor physical therapy (Kegel exercises, sometimes reinforced with the help of a specialized physical therapist)
- Bladder training and fluid management strategies
- Medications, especially for urgency
- Male urethral sling: A minimally invasive option for mild to moderate stress incontinence
- Artificial urinary sphincter (AUS): A reliable, surgical option for more persistent cases

Most men recover bladder control. For those who don't, effective solutions are available.

Sexual Health and Erectile Dysfunction (ED)

Erectile dysfunction (ED) is one of the most common concerns after prostate cancer treatment. It may result from surgery, radiation, or hormone therapy, and it can be frustrating or emotionally difficult.

We want to reassure you: ED is common, treatable, and nothing to be ashamed of.

Treatment Options for ED

- Oral medications, such as Viagra® or Cialis®
- Vacuum erection devices (VEDs)
- Penile injections for consistent and effective results
- Low-Intensity Shockwave Therapy (LiSWT): A non-invasive approach that stimulates blood flow
- Penile prosthesis surgery: A long-term solution when other treatments don't work

Whether you're ready to address ED now or want to revisit it later, our team is here to support you. Visit our website for educational sessions on Life After Prostate Cancer: urologygroup.com/events.

Staying Healthy

Long-term health supports both recovery and well-being:

- Eat a heart-healthy, plant-forward diet
- Stay active with regular physical activity
- Avoid smoking and limit alcohol
- Get enough sleep and manage stress

Ask your doctor before starting supplements, especially if you're receiving hormone therapy.

Emotional Support

The emotional effects of prostate cancer can be just as significant as the physical ones. Many men feel anxious, frustrated, or uncertain about the future. That's completely normal, and support is available.

- Consider speaking with a counselor or therapist
- Join a prostate cancer support group
- Lean on your care team. They're here to help, not just with cancer, but with your entire well-being.

Planning for the Future

Keep a record of your diagnosis, treatments, and PSA results. Bring this information to follow-up visits. If you notice new symptoms or changes in your health, let your care team know.

To us, survivorship is about more than monitoring; it's about living well, staying connected, and knowing you're not alone.

NAVIGATION & SUPPORT SERVICES

At The Urology Group, we know a prostate cancer diagnosis can feel overwhelming. That's why our Navigation & Support Services team is here to guide you every step of the way, from diagnosis and treatment, through recovery and beyond. You're not alone; we're with you.

Nurse Navigators

Our oncology nurse navigators are your personal guide and advocate. These trained professionals help by coordinating appointments, explaining your diagnosis and options, answering your questions between visits, and offering essential emotional support.

For more information, visit: urologygroup.com/patient-navigators

Patient Education & Resources

We offer clear, accessible information to help you feel informed and empowered throughout your care journey. This includes one-on-one education with your care team, printed handouts and booklets (like this one), and guidance to trusted websites and videos. Our goal is to support you in making informed decisions at every stage.

Financial Counseling

Cancer treatment can raise financial concerns. Our billing team and financial counselors are ready to help by reviewing your insurance and expected costs, explaining payment plans or options, and guiding you through applications for financial assistance if needed.

Supportive Services

We connect you with helpful services both locally and nationally:

- Mental health counseling
- Specialized dietitian support for treatment-related needs
- Patient and family support groups
- Transportation assistance for treatment visits

Personalized Follow-Up

Once your initial treatment ends, our care continues. We'll help you create a survivorship plan, monitor for long-term side effects, and support your wellness through healthy lifestyle guidance.



RESOURCES

When you are facing prostate cancer, reliable information and support can make a big difference. Below are some trusted organizations and websites that provide helpful resources for patients and their families.

Recommended Websites

The Urology Group — Download a digital version of this booklet and find updates — urologygroup.com

ZERO – The End of Prostate Cancer — Patient support, advocacy, and education — zerocancer.org

Prostate Cancer Foundation — Research funding and patient resources — pcf.org

Prostate Health Education Network (PHEN) — Focused on awareness — prostatehealthed.org

American Cancer Society — Cancer education and support programs — cancer.org

CancerCare — Free support services from oncology social workers — cancercare.org

Urology Care Foundation — Patient education from American Urological Association — urologyhealth.org

Support Services

Need help navigating appointments, treatment options, or emotional support? Contact our patient navigators at The Urology Group by visiting urologygroup.com/patient-navigators

REFERENCES

Wang A, Van Blarigan EL, Cheng I, et al. Race and Ethnicity, Lifestyle, Diet, and Survival in Patients with Prostate Cancer. JAMA Netw Open. 2025;8(2):e2460785. doi:10.1001/jamanetworkopen.2024.60785

NOTES

NOTES

This guide was created by The Urology Group to support patients and families throughout the prostate cancer journey. For the most current information and personalized guidance, always consult with your healthcare team.

© 2026 The Urology Group. All rights reserved.



THE UROLOGY GROUP

Advanced Care. Improving Lives.

The Urology Group is one of the largest single specialty groups of urologists in the United States.

Our group consists of more than 35 board-certified urologists with convenient neighborhood offices and a state-of-the-art outpatient surgery center in Norwood.

Together, we offer our patients a comprehensive team of urologic healthcare providers. We are the premier urology resource for Greater Cincinnati, Northern Kentucky, and Southeastern Indiana.