

CENTRA

PROSTATE HEALTH CENTER



UNDERSTANDING PROSTATE CANCER TREATMENT

A Guidebook for
Patients and
Caregivers

PROSTATE CANCER AND TREATMENT

Whether you have been diagnosed with prostate cancer, have a family member who has been or you are just interested in what treatment options Centra has to offer, this helpful booklet provides an overview of our services.

Prostate cancer is a common form of cancer, especially in older men. This cancer begins in the prostate, which is a small gland beneath the bladder. Depending on the stage of the cancer, it can spread beyond the prostate to nearby organs or to other parts of the body. Fortunately, in many cases, prostate cancer grows slowly.

Prostate cancer is a complicated disease that includes many factors that must be considered when planning treatment options. It is important to realize that not all prostate cancer is the same and that there is not always one “best” option for every situation. The Centra Prostate Health Center team will work with you to help make a decision that is appropriate based on your age, overall health and specifics related to your disease.

YOUR HEALTH CARE TEAM

The Centra Prostate Health Center team consists of:

- **Urologists** – physicians who treat and perform surgery on the male reproductive system and urinary system.
- **Radiation Oncologists** – physicians who use radiation to treat cancer.
- **Medical Oncologists** – physicians who treat cancer using prescription medications and chemotherapy.
- **Nurse Practitioner** – a nurse with advanced medical training who can perform exams, write prescriptions, and manage follow-up care.
- **Clinical Nurse Navigator** – a nurse who works with your team of physicians to coordinate your care, provide you with information, and will be a valuable resource for you and your family.
- **Other ancillary services include:**
 - Nutrition
 - Physical therapy
 - Counseling
 - Support groups

Here at Centra, a multi-disciplinary approach is taken towards treating prostate cancer. A patient and his family will meet with several members of the Centra Prostate Health Center team to determine the best approach to treat his disease. The Center's team has vast experience in the options available in the treatment of prostate cancer with proven quality in outcomes equaling some of the best centers in the country.

PROSTATE NURSE NAVIGATOR

It is often difficult to understand the different treatment options when a patient is feeling overwhelmed with a new cancer diagnosis. Our prostate cancer nurse navigator, a registered nurse, is the primary resource for prostate cancer patients and the family and friends who care for them.

Stepping in at the moment that the patient is diagnosed, a nurse navigator is instrumental in coordinating care for the patient in a timely and efficient manner. The navigator can help provide access to needed services. Most importantly, the navigator can provide emotional support for a patient and his family.

The nurse navigator help patients with any challenges or concerns they have during their diagnosis or treatment. She:

- Helps patients understand the specific diagnosis and treatment plans.
- Has educational materials available.
- Answers questions throughout the treatment process.
- Schedules appointments, as needed.
- Ensures that treatments have a team-based approach.
- Provides support for the physical, spiritual and emotional needs of patients during and after treatment.



Jerilyn Becker, RN

Several factors are taken into account when deciding a patient's best treatment option. The patient's age and overall condition, combined with the clinical stage of the disease, the PSA level and the Gleason Grade of the tumor, all play a role in the treatment decision.

PSA

Prostate Specific Antigen is a protein that is made by both normal prostate tissues and by prostate cancer. It is measured by a simple blood test. Many factors can cause a rise in the PSA level. In prostate cancer, the PSA level can give an indication about the extent of the disease. The PSA level also can be followed during and after treatment to monitor the success of the treatment.

STAGE

Stage refers to the size, extent and spread of the cancer. Generally, this is determined by the rectal finger exam of the prostate. Occasionally, additional tests are needed to further determine the stage. These tests are only needed when the PSA tests or Gleason Grade indicates a higher probability that the cancer has spread.

GLEASON GRADE

The Gleason Grade refers to how different the prostate cancer appears in comparison to normal prostate cells. A pathologist, after examining the tissue under the microscope, will determine the Gleason Grade by giving two scores of 1 to 5 based on the pattern of cancer and how aggressive the cells look.

Total Gleason scores from a prostate biopsy generally run anywhere from 6 to 10. Gleason 6 cancers tend to be less aggressive and have a lower risk of returning after treatment. Gleason 7 cancers are a medium level of aggressiveness and have an intermediate risk of recurring after treatment. Gleason 8 or higher cancers are aggressive and have a higher risk of recurring after treatment.

TREATMENT OPTIONS FOR LOCALIZED DISEASE

I. SURGERY

Robot Assisted Laparoscopic Radical Prostatectomy

The *da Vinci* Surgical System is a minimally invasive procedure performed by a urologist. This alternative to traditional prostatectomy puts the surgeon's eyes and hands at the controls of a state-of-the-art robotic platform. By providing surgeons with superior images and better precision, the *da Vinci* Surgical System makes it possible for the surgeon to perform minimally invasive prostate surgery with more ease and accuracy when compared to a traditional prostatectomy.



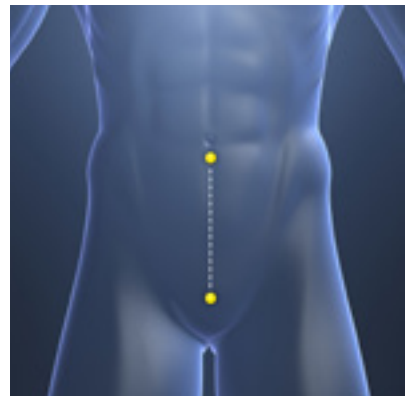
► Actual size as compared to a dime

The proven benefits of laparoscopic prostatectomy as compared to traditional surgery include decreased blood loss, faster return to normal activities, a shorter hospital stay, decreased post-operative pain and less scarring.

Robotic prostatectomy is currently the most common treatment for organ confined disease in this country. As with traditional open surgery, the entire prostate gland and attached seminal vesicles are removed.

Traditional Open Radical Prostatectomy

In addition to *da Vinci* prostatectomy, the prostate can be removed via an abdominal incision (radical retropubic prostatectomy) or via an incision made between the scrotum and the anus (radical perineal prostatectomy). The prostate and the attached seminal vesicles are removed with these surgeries.



The diagram shows where the surgical cuts are made in a retropubic prostatectomy

II. EXTERNAL BEAM THERAPY

3D-CRT

There are several forms of external beam radiation therapy. The first is 3-dimensional conformal radiation therapy in which the radiation oncologist uses CT scan information to identify the prostate cancer and the normal tissues to be avoided. He or she uses computer systems to reconstruct the position and relationship between these structures in 3 dimensions.

Each beam limits radiation exposure to normal tissues. The treatment is designed to give a high dose of radiation only to the prostate, while reducing the amount of radiation that the surrounding healthy areas receive.

Intensity Modulated Radiation Therapy (IMRT)

The second form of external beam radiation therapy, Intensity Modulated Radiation Therapy (IMRT), is the most technologically advanced, state-of-the-art form of external beam radiation. Similar to 3D-CRT, a CT scan is used to create a 3-D picture of the prostate and surrounding organs so the radiation can be delivered only to the prostate gland. IMRT is more precisely targeted than 3-D conformal radiation therapy. Each radiation beam is broken into many smaller beams to give just the right amount of radiation. The correct distribution of the radiation is calculated by complex computer programs, under the direct supervision of the radiation oncologist. This allows for precisely targeted radiation to treat the prostate while sparing other nearby organs from radiation. Therefore, IMRT allows for an increased radiation dose to be delivered to the prostate gland, potentially resulting in better elimination of cancer cells. IMRT is delivered in short sessions, five days a week, for eight to nine weeks.

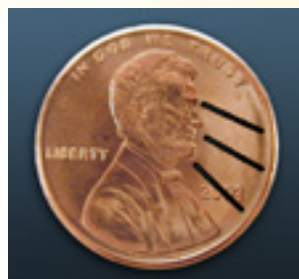
Image Guided Radiation Therapy (IGRT)

Because the prostate gland moves slightly inside the body from day to day, and because very exact positioning of the patient each day can be difficult, a more precise method to improve the accuracy of treatment has been developed called Image Guided Radiation Therapy (IGRT). IGRT is performed by placing small metal markers into the prostate that can be easily identified on x-rays. An x-ray image of the prostate is obtained immediately before treatment and is compared to the planned position of the prostate. If the prostate is not in precisely the proper position, the treatment position can be shifted to achieve the correct position of the prostate gland. This can achieve accuracy to within

1-2 millimeters. This allows the radiation oncologist to design treatments with less radiation to surrounding normal tissues, because this provides more certainty about the location of the prostate. This type of image guidance can be used with IMRT or 3D-CRT treatments.

III. BRACHYTHERAPY

In brachytherapy (sometimes called “interstitial radiation therapy” or “radioactive seed implants”), the radiation comes from tiny, radioactive seeds inserted directly into the prostate (Each seed is smaller than a grain of rice.) Specialized equipment is used to view the prostate tumor so the radiation oncologist and urologist can place the seeds correctly. The seeds are inserted into the tumor during an outpatient surgical procedure while the patient is under anesthesia. The seeds are small and typically do not cause any discomfort. Brachytherapy can be used alone or in combination with external beam radiation, depending on the patient’s stage and grade of cancer.



The seeds used in brachytherapy can be very small. One type of seed is shown on top of the penny.

IV. CRYOTHERAPY

Cryotherapy (also called cryosurgery) is another treatment for prostate cancer using extreme cold. Its effectiveness is based on the principle that freezing tissue to sub-zero temperatures will result in killing the cancer cells.

Cryotherapy is performed in the Operating Room, under general anesthesia, and is generally an outpatient procedure. During the procedure, the prostate tissue is frozen and thawed twice, and the entire procedure is usually completed in less than two hours. Areas of normal tissue, such as the rectum and sphincter muscle, are monitored carefully with the help of specialized thermometers in order to prevent their freezing. Bleeding is minimal and post-operative discomfort is generally not severe and is well-tolerated. A catheter to drain the bladder is typically left in for five to seven days. Unlike radiation, the procedure can be repeated again if it is not successful the first time.

V. ACTIVE SURVEILLANCE

In certain situations, the best treatment choice is closely following the cancer. Prostate cancer tends to be a slow-growing tumor. In older patients with other medical complications whose life expectancy is less than 10 years, it is less likely that the cancer will shorten their lives. Likewise, in patients with a small amount of non-aggressive-type prostate cancer, the tumor can be followed. Even in younger, healthy patients with smaller amounts of less aggressive cancer, active surveillance is becoming an increasingly popular option.

Active surveillance involves a careful plan of watching the patient closely for any signs of progression of the disease, including periodic exams and PSA checks. Repeat biopsies are done at certain intervals.

TREATMENT OPTIONS FOR ADVANCED DISEASE

I. HORMONAL THERAPY

There are two different types of hormonal therapy, both aiming to decrease the production of testosterone or block the effects it has on prostate cells. It is important to know that hormone therapy does not cure prostate cancer. Instead, it slows the cancer's growth while reducing the size of the tumor(s). It can be used in addition to other therapies to make them more successful in curing the disease.

Hormonal Drug Therapy is the first type of therapy. There are three classes of these drugs: LHRH analogs, LHRH antagonists and Antiandrogens. All three either prevent the production of testosterone or block its effect on the prostate cancer cells. Side effects may include a decreased sex drive, impotence or hot flashes. Patients may also experience fatigue, muscle weakness, anemia and bone density loss.

Orchiectomy is the second type of hormonal therapy and involves the surgical removal of the testes. Since the testes are the primary source of testosterone in a man's body, this removal seeks to deprive the prostate cancer cells of testosterone in order to shrink and prevent further growth. This option is usually reserved for men who do not want medical castration but have

advanced prostate cancer that is hormonal-responsive. This procedure is both effective and relatively simple. This can be performed as an outpatient procedure. However, the procedure is permanent, and its effects cannot be reversed. Side effects from the decrease in testosterone are common and can include a lowered sex drive, impotence, hot flashes and the potential for breast tenderness and growth. For this reason, many men opt for a non-surgical procedure with similar success rates.

II. CHEMOTHERAPY

In more advanced stages of prostate cancer, chemotherapy has been effective in helping control the disease. This medication is given by mouth or through the vein and circulates through the body to attack the growing cancer cells. Advances are being made in improving chemotherapy treatments while limiting the side effects.

Do you have more questions?

Our goal with this booklet is to provide you with a valuable resource of information to help you, along with your physicians, select the best treatment option for your prostate cancer. After reading through this booklet, we know that you probably have additional questions about these treatment options. To help you answer those questions between visits to your physician, turn to the prostate cancer nurse navigator as your resource. The nurse navigator is here to help you further understand treatment options or answer other questions you might have. You can reach the nurse navigator by calling 434.200.6267.



CENTRA PROSTATE HEALTH CENTER TEAM

UROLOGISTS



R. Dean Clower, M.D.

Dr. Clower earned his medical degree from the Medical College of Georgia and completed his residency at the Eastern Virginia School of Medicine in Urologic Surgery. Dr. Clower is board certified by the American Board of Urology.



Robert Cook, M.D.

Dr. Cook holds a medical degree from the Medical College of Virginia and completed his residency in urology at the Medical College of Virginia Hospitals. Dr. Cook is board certified by the American Board of Urology.



Ronald Fisher, M.D.

Dr. Fisher is a graduate of the University of Iowa College of Medicine. He completed his internship in General Surgery at the University of North Carolina School of Medicine. His residency in Urology was completed at the University of North Carolina Hospitals. Dr. Fisher is board certified by the American Board of Urology.



K. Finnie Green, M.D.

Dr. Green earned his medical degree from the University of Virginia School of Medicine. He followed his education with a General Surgery internship at UVA Health Sciences Center and a Urology residency at University of Virginia Hospitals. Dr. Green is board certified by the American Board of Urology.



Christopher J. Stands, M.D.

Dr. Stands holds a medical degree from Medical University of South Carolina. He completed both his internship in General Surgery and his residency in Urology at the University of Alabama at Birmingham. Dr. Stands is board certified by the American Board of Urology.



Corey M. Passman, M.D.

Dr. Passman is a graduate of the University of Alabama School of Medicine and completed his residency at the University of Alabama at Birmingham. Dr. Passman's fellowship in Endourology was completed at Wake Forest University. Dr. Passman is board certified by the American Board of Urology.

RADIATION ONCOLOGISTS



Angela L. Brady, M.D.

Dr. Brady is a radiation oncologist with Radiation Oncology Associates and treats patients at the Centra Alan B. Pearson Regional Cancer Center. She received her medical degree from Baylor College of Medicine and completed a residency in radiation oncology at Virginia Commonwealth University Health Systems. She is a graduate of the University of Kentucky and Columbia University.



Joy Hilliard, M.D.

Dr. Hilliard is a radiation oncologist with Radiation Oncology Associates and treats patients at the Centra Alan B. Pearson Regional Cancer Center. She also is associate medical director of Centra Cancer Care Services. She received her medical degree from Louisiana State University. She completed her residency at North Carolina Baptist Hospital, Wake Forest University, and her internship at Alton Ochsner Medical Foundation. She joined the medical staff in 1995 after serving on the faculty at Duke University Medical Center.

CENTRA PROSTATE HEALTH CENTER

UNDERSTANDING PROSTATE CANCER TREATMENT

A Guidebook for Patients and Caregivers



CENTRA