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The American Society of Clinical Oncology (ASCO) is the world’s leading professional organization representing oncology physicians of all oncology subspecialties who care for people with cancer. ASCO’s more than 35,000 members from the United States and abroad set the standard for patient care worldwide and lead the fight for more effective cancer treatments, increased funding for clinical and translational research, and, ultimately, cures for the many different types of cancer that strike an estimated 12 million people worldwide each year.

ABOUT CANCER.NET
The best cancer care starts with the best cancer information. Well-informed patients are their own best advocates and invaluable partners for physicians. Cancer.Net (www.cancer.net) brings the expertise and resources of the American Society of Clinical Oncology (ASCO), the voice of the world’s cancer physicians, to people living with cancer and to those who care for and about them. All the information and content on Cancer.Net was developed and approved by the cancer doctors who are members of ASCO, making Cancer.Net an up-to-date and trusted resource for cancer information on the Internet. Cancer.Net is supported by the Conquer Cancer Foundation, which provides funding for breakthrough cancer research, professional education, and patient and family support.

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Prostate Cancer

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ASCO ANSWERS is a collection of oncologist-approved patient education materials developed by ASCO for people with cancer and their caregivers.

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Introduction

It is one of many people’s biggest fears—sitting in the doctor’s office and hearing the word cancer. Men diagnosed with prostate cancer often say they were stunned by their diagnosis and couldn’t hear, much less remember, what was said afterward. However, absorbing the news of a cancer diagnosis is a key part of the coping process.

In the weeks to come, you may find it helpful to have family members or friends come to your appointments with you. They will not only give you some much needed support, but they can also help listen to and remember the information your health care team gives you. Using this *ASCO Answers* guide may also be helpful. This booklet was designed to explain some of the medical terms doctors may use when talking about cancer and help you keep track of the specifics of your prostate cancer diagnosis and treatment plan. Throughout this guide, you will find questions to ask your doctor, nurse, or another member of your health care team, as well as plenty of space to write down their answers or other important information. There are also check boxes you can use to identify the tests, procedures, and treatments that will make up your cancer care plan.

However you choose to accurately keep track of information, it is important to do so. Getting the facts about your diagnosis will help you make the best decisions based on your situation in the coming days. Additionally, being an informed, involved patient and voicing your questions and concerns will help you and your health care team form a partnership in your care. Tell your doctor and nurse how you prefer to receive information and how much you want to know about your diagnosis, treatment, and prognosis, which is the chance of recovery. Don’t be afraid to ask questions or to let your health care team know you don’t know what questions to ask.
My Health Care Team

Urologist / Urologic Oncologist: __________________________
Contact Information: _______________________________________
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Medical Oncologist: __________________________
Contact Information: ______________________________________
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Radiation Oncologist: __________________________
Contact Information: ______________________________________
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Primary Care Doctor: __________________________
Contact Information: ______________________________________
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Oncology Nurse: __________________________
Contact Information: ______________________________________
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Oncology Social Worker: __________________________
Contact Information: ______________________________________
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Counselor / Therapist: __________________________
Contact Information: ______________________________________
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Nutritionist / Dietitian: __________________________
Contact Information: ______________________________________
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Pharmacist: __________________________
Pharmacy: __________________________
Contact Information: ______________________________________
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OTHER TEAM MEMBERS:

Name: __________________________
Specialty: __________________________
Contact Information: ______________________________________
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The prostate is a walnut-sized gland located behind the base of a man’s penis, in front of the rectum, and below the bladder. It surrounds the urethra, the tube-like channel that carries urine and semen through the penis. The prostate’s main function is to make seminal fluid, which is the liquid in semen that protects, supports, and helps transport sperm.

Prostate cancer is the most common cancer in men, after skin cancer.

Prostate cancer development and spread

Prostate cancer begins when healthy cells in the prostate gland change and grow uncontrollably, forming a mass called a tumor. A cancerous tumor is malignant, meaning it can spread to other parts of the body. A benign tumor means the tumor will not spread.

Some prostate cancers grow very slowly and may not cause symptoms or problems for years. Other times, prostate cancer cells enter the bloodstream or lymphatic system and spread to other parts of the body through a process called metastasis. Although prostate cancer can spread anywhere in the body, one of the first places prostate cancer cells travel to is the regional lymph nodes, which are tiny, bean-shaped organs located near the prostate that help fight infection.

Prostate cancer may also spread farther away to other parts of the body, such as the bones, lungs, and liver. However, prostate cancer is somewhat unusual, compared with other types of cancer, because many tumors do not spread outside the prostate. Even if they do, metastatic prostate cancer can often be successfully treated, allowing men to live with good health for years after receiving this diagnosis.

QUESTIONS TO ASK THE DOCTOR

- Who will be part of my health care team, and what will each member do?
- Where can I find more information about prostate cancer?
- Does this hospital or cancer center have a learning resource center? If so, where is it located?
- Whom should I contact if I have any questions or concerns?
Medical illustrations for many types of cancer are available at www.cancer.net.

NOTES:
Understanding Your Diagnosis

Doctors may use a number of different tests to diagnose prostate cancer and to figure out if it has spread to another part of the body. Just like for many other types of cancer, a biopsy, which is described in more detail on page 7, is often the only way to make a definitive diagnosis of prostate cancer. After that, imaging tests may be used to find out whether the cancer has spread to other parts of the body.

Not every test is right for every person. Your doctor may consider factors such as your age, medical condition, signs and symptoms, and previous test results when deciding whether a specific diagnostic test is right for you.

Prostate cancer screening tests

☐ Prostate-specific antigen (PSA) blood test

PSA is a substance in the blood that is mainly made by the prostate gland. It is usually found at higher-than-normal levels in men with various prostate conditions, including prostate cancer, an enlarged prostate called benign prostatic hyperplasia (BPH), or inflammation or infection of the prostate.

Doctors often look at features of the PSA value, such as absolute level, change over time, and level in relation to prostate size, to decide if a biopsy is needed. In addition, one version of the PSA test allows the doctor to measure a specific component, called “free” PSA, which can sometimes help determine whether a tumor is cancerous. However, some prostate cancers do not cause an increased PSA level, so a normal PSA test result does not always mean there is no prostate cancer.

There is controversy about using the PSA test to look for prostate cancer in men who have no symptoms of prostate cancer. On one hand, the PSA test is useful for detecting early-stage prostate cancer, which helps men get the treatment they need before the cancer spreads. On the other hand, PSA screening finds conditions that are not cancer in addition to slow-growing prostate cancers that would never threaten a man’s life. Because of this, screening for prostate cancer may cause some men to have surgery and other treatments that may not be necessary and can cause significant side effects. For this reason, many men and their doctors may consider monitoring the tumor rather than starting treatment immediately.
According to a provisional clinical opinion on PSA screening for men with no symptoms of prostate cancer, ASCO recommends PSA screening based on a man’s health and life expectancy. So, men expected to live 10 years or less should not have PSA screening while men expected to live longer than 10 years should talk with their doctors to find out if the test is appropriate for them. Every man should discuss his situation and risk of prostate cancer with his doctor and then work together to make a decision.

**Digital rectal examination (DRE)**
During this test, the doctor inserts a gloved lubricated finger into a man’s rectum and feels the surface of the prostate for any irregularities. It is not a very precise test; therefore, most men with early-stage prostate cancer have normal DRE test results.

**Making a cancer diagnosis**
If the PSA or DRE test results are abnormal, the following tests can help the doctor figure out whether the cause may be cancer.

**Transrectal ultrasound (TRUS)**
A doctor inserts a probe into the rectum that creates a picture of the prostate using sound waves that bounce off the prostate. This procedure is usually done at the same time as a biopsy.

**Biopsy**
A biopsy is the removal of a small amount of tissue for examination under a microscope. To get a tissue sample, a surgeon most often uses TRUS and a biopsy tool to take very small slivers of prostate tissue.

Men usually have this procedure at a hospital or doctor’s office without needing to stay overnight. They are given local anesthesia beforehand to numb the area. Usually, men receive antibiotics before the procedure to prevent an infection from developing afterward.

The sample removed during the biopsy is sent to a laboratory where it is analyzed by a pathologist. A pathologist is a doctor who specializes in interpreting laboratory tests and evaluating cells, tissues, and organs to diagnose disease. By looking at the sample under a microscope, the pathologist can tell if a mass is cancerous and figure out what type of prostate cancer it is.

More than 95% of prostate cancers are a type called adenocarcinoma. A rare type of prostate cancer known as neuroendocrine cancer or small cell anaplastic cancer tends to spread earlier but usually does not make PSA.
Determining whether the cancer has spread

To find out if cancer has spread outside the prostate to other parts of the body, doctors may perform the imaging tests listed below. Because most types of prostate cancer do not spread very quickly, if they spread at all, many of these tests are not used when a man’s PSA level is only slightly high.

- **Bone scan**
  A bone scan uses a radioactive tracer to look at the inside of the bones. The tracer is injected into a person’s vein. It collects in areas of the bone and is detected by a special camera. Healthy bone appears gray on the scan, while areas of injury, such as those caused by cancer, appear dark.

- **Computed tomography (CT or CAT) scan**
  A CT scan creates a three-dimensional picture of the inside of the body with an x-ray machine. A computer then combines these images into a detailed, cross-sectional view that shows any abnormalities or tumors. Sometimes, a special dye called a contrast medium is given before the scan to provide better detail on the image.

- **Magnetic resonance imaging (MRI)**
  An MRI uses magnetic fields, not x-rays, to produce detailed images of the body. A special dye called contrast medium is given before the scan to create a clearer picture. This dye can be injected into a person’s vein or given as a liquid to swallow.

**Stages**

Men with prostate cancer are often given a stage along with their diagnosis. The stage is a way of describing where the cancer is located, if or where it has spread, and whether it is affecting other parts of the body. Doctors use diagnostic tests to find out the cancer’s stage, so staging may not be complete until all of the tests are finished. Knowing the stage helps your doctor decide which treatment plan will be best and may help predict your prognosis. The stages of prostate cancer are:

**Stage I.** Cancer is found in the prostate only, usually during another medical procedure. It cannot be felt during a DRE or seen on imaging tests. A stage I cancer is usually made up of cells that look similar to healthy cells and is likely to grow slowly.
**Stage IIA and IIB.** Stage II describes a tumor that is too small to be felt or seen on imaging tests. Or, it describes a slightly larger tumor that can be felt during a DRE. The cancer has not spread outside the prostate gland, but the cells usually look less like healthy cells and may tend to grow more quickly. The cancer has not spread to any lymph nodes or to distant organs.

**Stage III.** The cancer has spread beyond the outer layer of the prostate into nearby tissues. It may also have spread to the seminal vesicles, the glands that help make semen.

**Stage IV.** This stage describes any tumor that has spread to other parts of the body, such as the bladder, rectum, bone, liver, lungs, or lymph nodes. It is also called metastatic prostate cancer.

**Recurrent.** Recurrent prostate cancer is cancer that has come back after treatment. It may return in the prostate area or in another part of the body.

Used with permission of the American Joint Committee on Cancer (AJCC), Chicago, Illinois. The original source for this material is the AJCC Cancer Staging Manual, Seventh Edition, published by Springer-Verlag New York.
**Prognostic factors**

In addition to stage, doctors use prognostic factors to help figure out the best treatment and predict how successful this treatment will be.

- **PSA test**
  
  As described earlier, a PSA test measures prostate-specific antigen levels in a man's blood. For men already diagnosed with prostate cancer, the PSA level helps the doctor better understand the cancer and predict the potential success of the chosen treatment plan.

- **Gleason score**
  
  Prostate cancer is also given a grade called a Gleason score, which is based on how much the cancer looks like healthy tissue when viewed under a microscope. Tumors that grow more slowly and are less likely to spread usually look more like healthy tissue (called well differentiated), while tumors that are more likely to grow and spread to other parts of the body look less like healthy tissue (called poorly differentiated).

  The Gleason Scoring System is the most common prostate cancer grading system. The pathologist looks at how the cancer cells are arranged in the prostate and assigns a score on a scale of 1 to 5. Cancer cells that look similar to healthy cells are given a low score, and cancer cells that look less like healthy cells or are more aggressive looking are given a higher score. The doctor also looks at the main pattern of cell growth, which is the area where the cancer is most obvious, and looks for any other less common patterns of growth. These findings are also given a score. The scores are then added together to come up with an overall score between 2 and 10.

  A low-grade cancer grows more slowly and is less likely to spread than a high-grade cancer. Doctors look at the Gleason score in addition to the stage to help plan treatment. For example, active surveillance may be an option for a man with a small tumor, low PSA level, and a Gleason score of 6. On the other hand, men with a high Gleason score (8-10) may need more intensive treatment, even if it doesn’t appear that the cancer has spread.

**DIAGNOSIS SUMMARY**

**TYPE:**

- **Benign (not cancerous)**
  - Benign prostatic hyperplasia (BPH)—condition where prostate cells grow and block the flow of urine
  - Prostatitis—inflammation or infection of the prostate
  - High-grade prostatic intraepithelial neoplasia (PIN)—abnormal, pre-cancerous cells

- **Malignant (cancerous)**
  - Adenocarcinoma—the most common type of prostate cancer
  - Other rare type of prostate cancer:

**STAGE:**

- Stage I
- Stage IIA
- Stage IIB
- Stage III
- Stage IV
- Recurrent

**GLEASON SCORE:**

- Gleason X—the Gleason score cannot be determined
- Gleason 6 or lower—the cells are well differentiated
- Gleason 7—the cells are moderately differentiated
- Gleason 8, 9, or 10—the cells are poorly differentiated or undifferentiated
QUESTIONS TO ASK THE DOCTOR ABOUT YOUR DIAGNOSIS

- What type and stage of prostate cancer do I have? What does this mean?
- Is my tumor considered “low-risk,” “intermediate-risk,” or “high-risk”? What does this mean?
- What other diagnostic tests or procedures may be necessary?
- How can I prepare myself for each test or procedure?
- Where do I need to go to have these tests?
- When will I get the results? How will I get the results (over the phone, at the next appointment, etc.)?
- Who will explain the results to me?
- Should I see another doctor for a second opinion? Can you give me names of doctors to see?
- If I get a second opinion, will I have to repeat any tests or procedures?
- What is my prognosis?
Prostate Cancer Treatment

In cancer care, doctors with different specialties often work together to create an overall treatment plan that combines different types of treatment. The treatment options and recommendations your doctor gives you will depend on several factors, including the type and stage of cancer, possible side effects, and your preferences and overall health. Your care plan should also include treatment for symptoms and side effects, an important part of cancer care. When making treatment decisions, you are also encouraged to consider participating in a clinical trial. A clinical trial is a research study that tests whether a new approach to treatment is safe, effective, and possibly better than the standard treatment.

Before treatment begins, it is important to discuss the goals and possible side effects of treatment with your doctor, including the likelihood that the treatment will work and the chances of experiencing urinary, bowel, sexual, and hormone-related issues.

To start a conversation with your doctor, you may want to ask:

• How much experience do you have treating prostate cancer?
• What are my treatment options?
• Will I need more than one type of treatment?
• What treatment plan do you recommend for me? Why?
• What is the goal of the treatment(s) you are recommending? Is it to eliminate the cancer? To relieve my symptoms? Or both?
• What is the expected timeline for my treatment plan?
• When do I need to make a decision about starting treatment?

Active surveillance and watchful waiting

If prostate cancer is found at an early stage, is growing slowly, and your doctor feels treating the cancer would cause more discomfort than the disease, the recommended treatment is usually active surveillance or watchful waiting. During active surveillance, the cancer is monitored closely with regular PSA tests and DRE tests, as well as periodic biopsies. Active treatment only begins if the tumor shows signs of spreading, causes pain, or blocks the urinary tract. Active surveillance is usually preferred for men with a long life expectancy who may benefit from curative local therapy (see page 14) if the cancer shows signs of getting worse.

Watchful waiting involves less intensive monitoring with periodic PSA tests, DRE tests, and/or watching for symptoms. It is usually recommended for much older patients or those with other serious or life-threatening illnesses. If the cancer shows signs of getting worse, hormone therapy is often recommended to treat the symptoms.
Caution must be taken not to make errors of judgment about the disease. In other words, doctors must collect as much information as possible about the person's other illnesses and life expectancy so the chance to detect an early, aggressive prostate cancer is not missed. For this reason, many doctors recommend having another biopsy shortly after diagnosis to confirm the cancer really is in an early stage and growing slowly before considering active surveillance for an otherwise healthy man. New information is often available, and it is important for men to discuss these issues with their doctor to make the best decisions about their treatment.

QUESTIONS TO ASK THE DOCTOR ABOUT ACTIVE SURVEILLANCE

• Why are you recommending this treatment option for me?
• What type of follow-up tests will I need, and how often will I need them?
• What signs and symptoms should I report right away?
• Will I ever need to have active treatment? If so, when would this treatment begin?

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Local treatment

Local treatments are aimed at eliminating cancer from a specific, limited area of the body. For men diagnosed with early-stage prostate cancer, local treatments, such as surgery or radiation therapy, may get rid of the cancer completely. However, if the cancer has spread outside the prostate gland, other types of treatment may be needed to destroy cancer cells located in other parts of the body.

SURGERY

Surgery is the removal of the tumor during an operation to try to eliminate the cancer before it spreads outside the prostate. To make sure the entire tumor is removed, the urologist or urologic oncologist will also remove a small area of healthy tissue around the tumor, known as a margin. Urologists and urologic oncologists are doctors who specialize in the function and disorders of the urinary tract.

The type of surgery your doctor recommends will depend on the stage of the disease, your general health, and other factors. Surgical options include:

- **Radical (open) prostatectomy**
  A radical prostatectomy is the surgical removal of the entire prostate and the seminal vesicles. Lymph nodes in the pelvic area may also be removed. This operation has the risk of interfering with sexual function. Nerve-sparing surgery, when possible, increases the chance that a man can maintain his sexual function after surgery by avoiding surgical damage to the nerves that allow erections and orgasm to occur. Orgasm can occur even if some nerves are cut since these are two separate processes. Urinary incontinence, which is an inability to control urine flow, is also a possible side effect of a radical prostatectomy.

- **Robotic or laparoscopic prostatectomy**
  This type of surgery is generally much less invasive than a radical prostatectomy and may shorten recovery time. A camera and instruments are inserted through small, keyhole incisions in the patient’s abdomen. The surgeon then directs the robotic instruments to remove the prostate gland and surrounding tissue. In general, robotic prostatectomy causes less bleeding and less pain, but the sexual and urinary side effects can be similar to a radical prostatectomy. This procedure has not been available for as long as radical prostatectomy, so its long-term effectiveness is not known. Talk with your doctor about whether your treatment center offers this procedure and how it compares with a conventional radical prostatectomy.

- **Cryosurgery**
  Cryosurgery, also called cryotherapy or cryoablation, is the freezing of cancer cells with a metal probe inserted through a small incision in the area between the rectum and the scrotum, the skin sac that contains the testicles. Cryosurgery is not an established therapy or standard of care for men newly diagnosed with prostate cancer. It has not been compared with radical prostatectomy or radiation therapy, so doctors do not know if it can provide similar benefits. Its effects on urinary and sexual function are also not well defined.
Transurethral resection of the prostate (TURP)

TURP is most often used to relieve symptoms of a urinary blockage, not to get rid of a cancer. During this procedure, the person is given general anesthesia, which is medication to block the awareness of pain. Then a surgeon inserts a narrow tube with a cutting device called a cystoscope into the urethra to remove prostate tissue.

Questions to Ask the Doctor About Surgery

- Which type of surgery do you recommend? Why?
- What is the goal of this surgery?
- Will lymph nodes or any other tissue need to be removed?
- Where will the scar be, and what will it look like?
- Will I need to be admitted to a hospital for this operation? If so, how long will I need to stay in the hospital?
- What kind of pain should I expect after surgery? What can be done to manage this pain?
- Will I have difficulty controlling my bladder function after this surgery? If so, how will this side effect be managed?
- Could this surgery affect my sexual function? If so, how and for how long?

Notes:
RADIATION THERAPY

Radiation therapy uses high-energy rays to destroy cancer cells. It can be given as an initial treatment for early-stage prostate cancer, or it can be used after surgery to destroy cancer cells that could not be removed. A doctor who specializes in giving radiation therapy to treat cancer is called a radiation oncologist.

There are different types of radiation therapy that may be recommended as part of your treatment plan:

- **External-beam radiation therapy**
  External-beam radiation therapy focuses a beam of radiation on the area with the cancer. Usually this is a high-energy x-ray beam, but sometimes it is a proton beam. Some cancer centers use conformal radiation therapy (CRT), in which computers help precisely map the location and shape of the cancer. CRT reduces radiation damage to healthy tissues and organs near the tumor by directing the radiation therapy beam from different directions to focus the dose on the tumor.

- **Intensity-modulated radiation therapy (IMRT)**
  IMRT is a type of external-beam radiation therapy that uses CT scans to form a three-dimensional (3D) picture of the prostate before treatment. A computer uses this information about the size, shape, and location of the prostate cancer to figure out how much radiation is needed to destroy it. With IMRT, high doses of radiation can be directed at the prostate without increasing the risk of damaging nearby organs.

- **Proton therapy**
  Proton therapy, also called proton beam therapy, is a type of external-beam radiation therapy that uses protons rather than x-rays. At high energy, protons can destroy cancer cells. Current research has not shown that proton therapy provides any more benefit to men with prostate cancer than traditional radiation therapy. It is also more expensive.

- **Brachytherapy**
  Brachytherapy is given by placing radioactive sources directly into the prostate. These sources (called seeds) give off radiation just around the area they are inserted into and may be used for hours (high-dose rate) or for weeks (low-dose rate). Low-dose rate seeds are left in the prostate permanently, even after all the radioactive material has been used up. For a man with a high-risk cancer, brachytherapy is usually combined with other treatments.
Radiation therapy may cause immediate side effects such as diarrhea or other problems with bowel function; increased urinary urge or frequency; fatigue; impotence, or erectile dysfunction; and rectal discomfort, burning, or pain. Most of these side effects tend to go away after treatment, but impotence is usually permanent. Many side effects of radiation therapy may not occur until months or years after treatment has ended.

QUESTIONS TO ASK THE DOCTOR ABOUT RADIATION THERAPY

• Which type of radiation therapy do you recommend? Why?
• How often will my radiation treatments occur, and how long will I receive treatment?
• How much time will each treatment take?
• What will I experience when I receive radiation therapy? Will it hurt or cause me discomfort?
• How will this treatment affect my daily life? Will I be able to work, exercise, and perform my usual activities?
• What are the possible short- and long-term side effects of this treatment? How can these side effects be prevented and/or managed?

NOTES:
Systemic treatment

Doctors use treatments such as hormone therapy, chemotherapy, and vaccine therapy to reach cancer cells throughout the body. For men with later-stage prostate cancer or those considered to have a high risk of recurrence, systemic treatments may be used to shrink the cancer before surgery or radiation therapy, which is known as neoadjuvant therapy. Systemic treatment can also be used after local treatment to eliminate any remaining cancer cells and reduce the chance the cancer will return. This is called adjuvant therapy.

HORMONE THERAPY
Hormone therapy, also known as androgen ablation, androgen-deprivation therapy, or castration, is used to reduce the levels of male sex hormones called androgens in the body or keep them from reaching prostate cancer cells. Androgens, which are made mainly in the testicles, drive prostate cancer growth and spread.

The most common androgen is testosterone. Testosterone levels in the body can be lowered either by surgically removing the testicles, known as surgical castration, or by taking drugs that turn off the function of the testicles, called medical castration.

Hormone therapy is recommended as a treatment option in a number of different situations, including recurrent prostate cancer and metastatic prostate cancer. Hormone therapy is also considered as an adjuvant therapy if prostate cancer has been found in the lymph nodes after a radical prostatectomy.

Recent research has shown that hormone therapy can help lengthen lives when used with radiation therapy for a prostate cancer that is more likely to recur. For some men, hormone therapy will be used first to shrink a tumor before radiation therapy or surgery. For other men with prostate cancer that has spread locally, called locally advanced or high-risk prostate cancer, hormone therapy is given before, during, and after radiation therapy for three years.

Hormone therapy includes:

- **Bilateral orchiectomy**
  Bilateral orchiectomy is the surgical removal of both testicles. It was the first treatment used for metastatic prostate cancer more than 70 years ago. Even though this is an operation, it is considered a hormone therapy because it removes the main source of testosterone production, the testicles. The effects of this surgery are permanent and cannot be reversed.

- **LHRH agonists**
  LHRH stands for luteinizing hormone-releasing hormone. Medications known as LHRH agonists prevent the testicles from receiving messages sent by the body to make testosterone. By blocking these signals, LHRH agonists reduce a man’s testosterone level just as well as removing his testicles. However, unlike surgical castration, the
effects of LHRH agonists are reversible, so testosterone production usually begins again once a man stops taking the medication.

LHRH agonists are injected or placed as small implants under the skin. Depending on the drug used, they may be given once a month or just once a year. When LHRH agonists are first given, testosterone levels briefly increase before falling to very low levels. This effect, known as a “flare,” happens because of a temporary surge in testosterone production by the testicles in response to the way LHRH agonists work in the body. This flare may increase the activity of prostate cancer cells and cause symptoms and side effects, such as bone pain in men with cancer that has spread to the bones.

- **LHRH antagonist**

  This class of drugs, also called a gonadotropin-releasing hormone (GnRH) antagonist, stops the testicles from producing testosterone like LHRH agonists, but they reduce testosterone levels more quickly and do not cause a flare like LHRH agonists. The U.S. Food and Drug Administration (FDA) has approved one drug, degarelix (Firmagon), given by monthly injection, to treat advanced prostate cancer. One side effect of this drug is that it may cause a severe allergic reaction.

- **Anti-androgens**

  While LHRH agonists and antagonists lower testosterone levels in the blood, anti-androgens block testosterone from binding to “androgen receptors.” Androgen receptors are chemical structures in cancer cells that allow testosterone and other male hormones to enter the cells. These drugs, such as bicalutamide (Casodex), flutamide (Eulexin), and nilutamide (Nilandron), are taken as pills, usually by men who have “hormone sensitive” prostate cancer, which means that the prostate cancer still responds to hormone therapy. However, a newer type of anti-androgen called enzalutamide (Xtandi) is approved by the FDA for men with metastatic castration-resistant prostate cancer who have or have not previously received docetaxel (Docofrez, Taxotere). Anti-androgens are not usually used by themselves as a prostate cancer treatment.

- **Combined androgen blockade**

  Sometimes anti-androgens are combined with bilateral orchiectomy or LHRH agonist treatment to maximize the blockade of male hormones. This is because even after the testicles are no longer producing hormones, the adrenal glands still make small amounts of androgens. Many doctors also feel that this combined approach is the safest way to start hormone treatment, as it prevents the possible flare that sometimes happens in response to LHRH agonist treatment. Some, but not all, research has shown about a six month difference in long-term survival from the use of combined androgen blockade; therefore, some doctors prefer to give combined drug treatment while others may give the combination early in the treatment to prevent the flare.

- **CYP17 inhibitors**

  Although the testicles are the main producers of androgens, other cells in the body, including prostate cancer cells, can still make small amounts. This often is enough to drive cancer growth. Abiraterone (Zytiga) is a drug that blocks an enzyme called CYP17 and prevents these cells from making certain hormones, including androgens. It is a pill taken every day with prednisone (multiple brand names). Abiraterone has been approved by the FDA as a treatment for progressive metastatic castration-resistant prostate cancer, regardless of whether a person has received docetaxel chemotherapy.

  Abiraterone may cause serious side effects, such as high blood pressure, low blood potassium levels, and fluid retention. Other common side effects include weakness, joint swelling or pain, swelling in the legs or feet, hot flushes, diarrhea, vomiting, shortness of breath, and anemia.
In general, men having hormone therapy may experience impotence, loss of sexual desire, hot flashes with sweating, gynecomastia (growth of breast tissue), depression, weight gain, loss of muscle mass, and osteopenia or osteoporosis, which is thinning of bones.

These side effects generally go away after hormone treatment has finished and testosterone levels recover, except in men who have had an orchiectomy. Some men who have taken LHRH agonists for many years may also continue to have hormonal effects, even if they are no longer taking these drugs.

Another potentially serious side effect of hormone therapy is the risk of developing metabolic syndrome. Metabolic syndrome is a set of conditions, such as obesity, high levels of blood cholesterol, and high blood pressure, that increase a person’s risk of heart disease, stroke, and diabetes. Currently, it is not certain how often this happens or exactly why it happens, but it is clear that the risk is increased even if medical castration is temporary.

The risks and benefits of castration should be carefully discussed with your doctor. For men with metastatic prostate cancer, especially if it is advanced and causing symptoms, most doctors believe that the benefits of castration far outweigh the risks of metabolic syndrome.

QUESTIONS TO ASK THE DOCTOR ABOUT HORMONE THERAPY
• What type of hormone therapy do you recommend? Why?
• How long will I need to continue this treatment?
• What are the possible short- and long-term side effects of this treatment option?
• Could this treatment affect my sexual function? If so, how and for how long?

NOTES:
CHEMOTHERAPY
Chemotherapy is the use of drugs to destroy cancer cells, usually by stopping their ability to grow and divide.Chemotherapy is usually given by a medical oncologist, a doctor who specializes in treating cancer with medication.

Systemic chemotherapy gets into the bloodstream to reach cancer cells throughout the body. Chemotherapy for prostate cancer is given through an intravenous (IV) tube placed into a vein using a needle. A chemotherapy regimen usually consists of a specific number of cycles given over a set period of time.

Chemotherapy is usually recommended for men with advanced or castration-resistant prostate cancer. There are several standard drugs that are used, and a number of new drugs are currently being studied in clinical trials. In general, standard chemotherapy begins with docetaxel combined with a steroid called prednisone. However, other drugs, such as cabazitaxel (Jevtana) and mitoxantrone (Novantrone), may be used in specific situations.

The side effects of chemotherapy depend on the individual, the type of chemotherapy received, the dose used, and the length of treatment. They may include fatigue, sores in the mouth and throat, diarrhea, nausea and vomiting, constipation, blood disorders, nervous system effects, changes in thinking and memory, sexual and reproductive issues, appetite loss, pain, and hair loss. The side effects of chemotherapy usually go away once treatment has finished. However, some side effects may continue, come back, or develop later.

Ask your doctor which side effects you may experience, based on your treatment plan. Your health care team will work with you to manage or prevent many of these side effects.

QUESTIONS TO ASK THE DOCTOR ABOUT CHEMOTHERAPY
- Based on the type and stage of the prostate cancer, will chemotherapy be part of my treatment plan?
- Which type of chemotherapy do you recommend? Why?
- How long will I need to have chemotherapy?
- Will chemotherapy affect my daily life? Will I be able to work, exercise, and perform my usual activities?
- What are the potential side effects of this treatment? What can be done to prevent or manage these side effects?

NOTES:
VACCINE THERAPY
Sipuleucel-T (Provenge) is an immunotherapy that is designed to boost the body’s natural defenses to fight the cancer. Immunotherapy uses materials made either by the body or in a laboratory to improve, target, or restore immune system function.

Sipuleucel-T is adapted for each patient. Before treatment, blood is removed from the patient during a process called leukapheresis. Special immune cells are separated from the blood, modified in the laboratory, and then put back into the patient. At this point, the person’s immune system may recognize and destroy the prostate cancer cells. It is difficult to know if this treatment is working to treat the cancer for a specific person, though, because it has not been shown to shrink the cancer, lower the PSA level, or keep the cancer from getting worse. However, research studies have shown that treatment with sipuleucel-T can increase survival in men with castration-resistant metastatic prostate cancer with few or no symptoms compared to treatment with an inactive vaccine called a placebo.

QUESTIONS TO ASK THE DOCTOR ABOUT VACCINE THERAPY
• How is the vaccine made?
• How does it work?
• How often is the vaccine given?
• What will I experience when I receive the vaccine? Will it hurt or cause me discomfort?
• How long will I need to continue this treatment?
• What short- and long-term side effects may I experience?
• Are there other treatment options we should consider?
Clinical trials

Doctors and scientists are always looking for better ways to treat men with prostate cancer. To make scientific advances, doctors create research studies involving volunteers, called clinical trials. In fact, every drug that is now FDA-approved was previously tested in clinical trials.

Many clinical trials are focused on evaluating whether a new treatment is safe, effective, and possibly better than the current (standard) treatment. These types of studies evaluate new drugs, different combinations of existing treatments, new approaches to radiation therapy or surgery, and new methods of treatment. There are also clinical trials that study new ways to ease symptoms and side effects during treatment and manage late effects that may occur after treatment.

People who participate in clinical trials are often among the first to receive new treatments before they are widely available. However, there is no guarantee that the new treatment will be safe, effective, or better than the standard treatment.

People decide to participate in clinical trials for many reasons. For some men with prostate cancer, a clinical trial is the best treatment option available.

Because standard treatments are not perfect, people are often willing to face the added uncertainty of a clinical trial in the hope of a better result. Other people volunteer for clinical trials because they know that these studies are the only way to make progress in treating prostate cancer. Even if they do not benefit directly from the clinical trial, their participation may help other men with prostate cancer in the future.

Some people worry if they participate in a clinical trial, they may receive no treatment by being given a placebo or a “sugar pill.” However, placebos are usually combined with standard treatment in most cancer clinical trials. When a placebo is used in a study, it is done with the full knowledge of the participants.

If you decide to join a clinical trial, you will participate in a process known as informed consent. During informed consent, the doctor will list all of your options and help you understand how the new treatment is different from the standard treatment. The doctor must also list all of the risks of the new treatment, which may or may not be different from the risks of the standard treatment. Finally, the doctor must explain what will be required of each patient in order to participate in the clinical trial, including the number of doctor visits, tests, the schedule of treatment, and the costs you may need to pay.

Keep in mind, even if you decide to join a clinical trial, you may stop participating at any time for any personal or medical reason.

To learn more about clinical trials, visit www.cancer.net/clinicaltrials.
QUESTIONS TO ASK THE DOCTOR ABOUT CLINICAL TRIALS

• How do clinical trials help men with prostate cancer?
• What clinical trials are open to me? Where are they located, and how do I find out more about them?
• What happens during a clinical trial?
• How do the costs of participating in a clinical trial compare with the costs of standard treatment?
• Where can I learn more about clinical trials?
Managing symptoms and side effects

In addition to treatment to slow, stop, or eliminate prostate cancer, an important part of your care is relieving symptoms and side effects. This approach is called palliative care.

Palliative care is any treatment that focused on reducing a person's symptoms, improving quality of life, and supporting patients and their families. Any person, regardless of age or type of cancer, may receive palliative care. Ideally palliative care should start as early as needed in the cancer treatment process and continue throughout all stages of the disease. It can be given at the same time as disease-directed treatment or on its own.

Palliative treatments vary widely and often include medication, nutritional changes, relaxation techniques, emotional support, and other therapies. You may also receive palliative treatments similar to those meant to eliminate the cancer, such as surgery or radiation therapy, so it is important to understand the goals of each treatment in your treatment plan.

Before treatment begins, talk with your health care team about the possible side effects of your specific treatment plan and palliative care options. And during and after treatment, be sure to tell your doctor or another member of your health care team if you are experiencing a problem so it can be addressed as quickly as possible.

For more information about palliative care, visit www.cancer.net/palliativecare.

QUESTIONS TO ASK THE DOCTOR ABOUT PALLIATIVE CARE

- What can be done to manage any symptoms and side effects I may experience?
- Can you recommend someone who specializes in palliative care?
- Where can I receive palliative care services?
- What other support services are available to me? To my family?

NOTES:
Developing a treatment plan

Your doctor will use the type and stage of the cancer, as well your overall health, to help develop the most effective treatment plan. Because most prostate cancers are found in the early stages when they are growing slowly, you usually do not have to rush to make treatment decisions. During this time it is important to talk with your doctor about the risks and benefits of all your treatment options and when treatment should begin. This discussion should also address the current state of the cancer, such as whether PSA levels are rising or steady and whether the cancer has spread outside the prostate; your health history; and any other medical conditions you may have. Participating in a clinical trial is an option for all stages of prostate cancer.

EARLY-STAGE PROSTATE CANCER

Early-stage prostate cancer means that cancer cells are found only in the prostate. If the cancer has a Gleason score of 6 or less and a PSA level less than 10, it usually grows very slowly and may take a number of years to cause any symptoms or other health problems, if it ever does at all. As a result, active surveillance may be recommended. Alternatively, radiation therapy or surgery may be suggested depending on your age and overall health. Clinical trials testing new types of treatment may also be an option.

For men with an early-stage cancer that has a higher Gleason score, the cancer may be faster growing. As a result, radical prostatectomy and radiation therapy are often appropriate. However, your doctor will consider your age and general health before recommending either (or both) as a treatment option.

LOCALLY ADVANCED PROSTATE CANCER

For some men with a larger tumor, local treatments, like surgery and radiation therapy, are less likely to eliminate the cancer by themselves. Radical prostatectomy at this stage is not nerve sparing and is often done with removal of the pelvic lymph nodes. Some men are given neoadjuvant hormone therapy, meaning the hormone therapy is given before surgery, while others have radiation therapy after surgery.
Research has shown that adjuvant radiation therapy may improve survival for men with locally-advanced prostate cancer or those with positive margins after prostatectomy. Having positive margins means that cancer cells were found in the area of healthy tissue surrounding the prostate that was removed during surgery.

For men who receive radiation therapy as their primary treatment, it is generally combined with several months of hormone therapy if there is a greater chance of recurrence based on disease extent, PSA level, and/or Gleason score. For older men with limited longevity and whose cancer is not causing symptoms, or for those who have another more serious illness, watchful waiting may be considered.

**METASTATIC PROSTATE CANCER**

Metastatic prostate cancer has spread to another location in the body, such as the bladder, rectum, lymph nodes, or bones. Men with this diagnosis are encouraged to talk with doctors who are experienced in treating this stage of prostate cancer because there can be different opinions about the best treatment plan.

At this stage, surgery to remove the prostate and pelvic lymph nodes cannot eliminate the cancer. As a result, most men with metastatic prostate cancer receive hormone therapy. If the cancer grows after hormone therapy, several standard drugs can be used. Some men may also receive external-beam radiation therapy to an area of concern because of pain or other reasons. Participating in a clinical trial is also an option.

An important part of treating metastatic prostate cancer is relieving any symptoms and/or side effects you may experience. Surgery (TURP) may be used to manage symptoms such as bleeding or urinary obstruction, while bone-modifying drugs may be used to strengthen bones and reduce the risk of pain, progression, and fractures for men with prostate cancer that has spread to the bone. Intravenous radiation therapy with strontium and samarium also helps relieve bone pain.

For most people, a diagnosis of metastatic cancer is very stressful and, at times, difficult to bear. Patients and their families are encouraged to talk about the way they are feeling with doctors, nurses, social workers, or other members of the health care team. It may also be helpful to talk with other patients, including through a support group.

**CASTRATION-RESISTANT PROSTATE CANCER**

Prostate cancer that no longer responds to hormone therapy, such as LHRH agonists or anti-androgens, is considered castration resistant and can be difficult to treat. Doctors may recommend chemotherapy for men with this type of prostate cancer, especially those with bone pain or other cancer-related symptoms. Research studies of chemotherapy treatment plans that include the drug docetaxel have shown these regimens improve survival by several months. Cabazitaxel can be used after docetaxel stops working.

For some patients who have no or very few cancer symptoms and generally have not had chemotherapy, vaccine therapy with sipuleucel-T may be an option. In 2010,
the FDA approved sipuleucel-T for men with castration-resistant metastatic prostate cancer with few or no symptoms because in research studies it increased survival by about four months compared with placebo.

The FDA has approved treatment with the CYP17 inhibitor abiraterone along with prednisone for men with castration-resistant prostate cancer that has grown or spread in men with or without previous chemotherapy with docetaxel. In addition, the drug enzalutamide is FDA-approved for men with metastatic castration-resistant prostate cancer who may or may not have received docetaxel treatment.

**RECURRENT PROSTATE CANCER**

After surgery or radiation therapy, the PSA level in the blood usually drops. If the PSA level starts to rise again, it may be a sign that the cancer has come back. When this occurs, your doctor will begin a new cycle of testing to learn as much as possible about the possible recurrence, including where the recurrence is located.

The cancer may come back in the prostate (called a local recurrence), in the tissues or lymph nodes near the prostate (a regional recurrence), or in another part of the body, such as the bones, lungs, or liver (a distant or metastatic recurrence). Sometimes the doctor cannot find a tumor even though the PSA level has increased. This is known as a PSA-only recurrence.

After testing is done, you and your doctor will talk about treatment options. The choice of treatment plan will be based on the type of recurrence and the treatment(s) you have already received. A treatment plan for recurrent prostate cancer may include radiation therapy, prostatectomy for men initially treated with radiation therapy, or hormone therapy. Your doctor may also suggest participating in a clinical trial that is studying a new way to treat recurrent prostate cancer.

Palliative care usually includes pain medication, external-beam radiation therapy, treatment with strontium or samarium, or other treatments to reduce bone pain.

People with recurrent cancer often experience emotions such as disbelief or fear. Patients are encouraged to talk with their health care team about these feelings and ask about support services to help them cope.

For more information about prostate cancer treatment, visit www.cancer.net/prostate.
QUESTIONS TO ASK THE DOCTOR ABOUT YOUR TREATMENT PLAN

• Who will be coordinating my overall treatment and follow-up care?
• What is the goal of my treatment plan?
• What clinical trials are open to me?
• What is my prognosis?
• Whom should I contact for support and emotional help for me? For my family?
• If I am worried about managing the cost of treatment, who can help me with this concern?

NOTES:
Coping With Side Effects

Fearing the side effects of prostate cancer treatment is common, but it may help to know that preventing and controlling side effects is a major focus of your health care team. Before starting treatment, talk with your doctor or nurse about which side effects are most likely to happen. Then, once treatment begins, let your health care team know what side effects you are experiencing. Although you may feel embarrassed talking about some of these issues, the information you provide will allow the health care team to manage any side effects as they develop.

The specific side effects you may experience during and after treatment for prostate cancer depend on a number of factors, including the cancer’s location, your individual treatment plan, and your overall health. However, some of the potential physical, emotional, and social effects experienced by men receiving treatment for prostate cancer are described in this section.

Preventing and managing side effects is an important part of any cancer care plan.

Physical effects

**Urinary incontinence.** An inability to control urine flow is a frequent side effect of surgery to remove the prostate and radiation therapy to the pelvic area. This side effect may be temporary or permanent. The most common type of incontinence that occurs after treatment for prostate cancer, stress incontinence, causes men to leak urine when they cough, laugh, sneeze, or exercise. Talk with your doctor about medications and surgical procedures that may help manage this condition.

**Bowel problems.** Some men with prostate cancer who receive radiation therapy may have bowel problems during and after treatment. Possible bowel problems include diarrhea, gas, loss of control of bowel movements, and visible or invisible bleeding with bowel movements. These issues are more commonly caused by external-beam radiation therapy than by brachytherapy. Many men are able to manage bowel problems by taking over-the-counter medications, and most of these problems go away over time.
**Sexual issues.** Short-term or permanent impotence may occur in men who are treated with surgery, radiation therapy, or hormone therapy for prostate cancer. If you have had surgery to remove your prostate, it is more likely that your impotence will be permanent. If you have impotence caused by hormone therapy, your ability to have an erection may improve after treatment ends. If you have received radiation therapy, you may not have any signs of impotence until months after treatment has finished. Talk with your doctor about medications, a vacuum constriction device, or an artificial implant to help you manage impotence and achieve erections. In addition, couples counseling may help you have productive conversations with your spouse or partner about how to cope with impotence and support each other.

**Infertility.** Surgery, radiation therapy, and chemotherapy may cause temporary or permanent infertility (inability to father a child). If this is a concern for you, talk with your doctor before treatment begins about possible fertility-related side effects.

**Hormonal changes.** Hormone therapy lowers levels of testosterone and other male sex hormones. As a result, many men who receive hormone therapy not only experience side effects like impotence and a decreased desire to have sex, but they may also have hot flashes with severe sweating, growth of breast tissue, depression, weight gain, osteopenia or osteoporosis, and an abnormally low level of red blood cells. The risk of high blood pressure, diabetes, and heart attacks is also higher for men who receive hormone therapy. Your doctor can help prevent or treat most of these side effects.

**Fatigue.** Cancer and its treatment often cause a persistent sense of tiredness or exhaustion. Most people receiving cancer treatment experience some type of fatigue, which can make even a small effort, such as walking across a room, seem like too much. Fatigue can seriously affect all aspects of a person’s life, from relationships with friends and family to the ability to perform at work. It is important to tell your doctor if you are experiencing fatigue because there are things your health care team can do to help.

**Pain.** Pain can be caused by the tumor, be a side effect of cancer treatment, or result from factors not related to the cancer. Untreated pain can make other aspects of cancer seem worse, such as fatigue, weakness, nausea, sleep disturbances, depression, anxiety, and mental confusion. However, it is important to know that up to 95% of cancer pain can be treated successfully using medication or other strategies. Your doctor or a pain specialist can help you find an effective pain-relief strategy.

For more information about managing side effects, visit www.cancer.net/sideeffects.
Emotional and social effects

In addition to physical side effects, you may experience emotional and social effects and sexual health concerns. For many men, a diagnosis of prostate cancer is stressful and can trigger difficult emotions.

Research has shown that sharing fears and anxieties with family, friends, counselors, clergy, or support groups helps strengthen patients emotionally, and perhaps even physically. If you don’t find it easy to open up to others, you may want to express your feelings in other ways, such as:

• Writing in a journal or starting a blog
• Doing artistic projects, such as painting
• Praying or meditating
• Reading
• Slowing down and reflecting

However, even with outlets to express their feelings, sometimes men with prostate cancer and those closest to them continue to experience emotional and social challenges. If you are feeling anxious, depressed, or stressed about your diagnosis and treatment, talk with a member of your health care team, such as an oncology nurse. Oncology nurses not only have a wealth of experience and knowledge about cancer, cancer treatment, and side effects, but they can also provide you with emotional and social support, as well as help you develop effective coping strategies.

Another good resource is an oncology social worker. An oncology social worker can help you navigate the health care system; find support to manage the day-to-day challenges of living with cancer; and provide counseling, education, information services, discharge and home care planning services, and referrals to community resources for you and your family and friends. Oncology social workers practice in many settings, including cancer centers, hospitals, doctors’ offices, cancer-related agencies, hospices, and private practices. If there is not an oncology social worker at the place where you receive treatment, call the nearest cancer center or university/teaching hospital to ask if there is one on staff.

Relationships and prostate cancer

After a prostate cancer diagnosis, both people in a relationship may experience sadness, anxiety, anger, or even hopelessness. There may also be shifts in the way couples take care of household chores or other activities. For some couples, facing the challenges of cancer together strengthens their relationship and commitment. For others, especially those who struggled before the diagnosis, the stress of cancer may create additional problems.

Besides changes in roles and responsibilities, prostate cancer often has the biggest effect on a couple’s sex life and intimacy. Depression, fatigue, nausea, impotence, and other physical or emotional problems may lower sex drive or make intercourse difficult. Both partners may feel anxious about this issue, but they may be reluctant to talk about it. Every couple has varying levels of comfort in discussing sexuality and intimacy. If this discussion is especially awkward or uncomfortable for you, consider getting help from a counselor, therapist, your doctor, or a social worker. Doctors do not always regularly discuss this topic during office visits, but they should be able to listen to your concerns and provide suggestions for managing sexual side effects. Your doctor can also give you referrals to other health care professionals who can help facilitate these discussions and suggest ways to maintain intimacy.

Because physical and emotional needs change frequently as couples cope with cancer, it is important for both people
in the relationship to continue to share how they are feeling during and after treatment. It is also important to talk as openly and honestly as possible to avoid the frustration and anger that may result from misinterpreting your partner’s behavior. Sometimes both partners need extra reassurance that they are still loved. Talking about feelings and personal needs with honesty, sincerity, and openness greatly reduces the stress cancer can place on a relationship.

You can learn more about coping with the physical and emotional effects of prostate cancer at www.cancer.net/coping. For a list of support organizations and other resources, visit www.cancer.net/support.

QUESTIONS TO ASK THE DOCTOR ABOUT SIDE EFFECTS

• What are the potential short- and long-term side effects of each treatment in my treatment plan?
• Are there ways to help me prepare for treatment and decrease the chance of experiencing side effects?
• Will I have difficulty controlling my bladder function after treatment?
• Could treatment affect my sexual function? If so, how and for how long?
• What can be done to manage these side effects?
• If my partner and I are having trouble communicating, what support services and other resources are available to us?
Follow-Up Care

After treatment for prostate cancer ends, talk with your doctor about developing a survivorship care plan. This plan will include regular physical examinations and medical tests to monitor your recovery for the coming months and years. It will also involve watching for signs that the cancer has come back, in addition to managing any ongoing or late effects of treatment.

Different people have different risks, so it is important to talk with your doctor about how your risk affects your survivorship care plan. Many people who have finished treatment for prostate cancer receive their follow-up care through their primary care doctor. Your prostate cancer specialist can provide you and your primary care doctor a written treatment summary, as well as recommendations for your follow-up care.

Recommended follow-up tests

Regular visits with your doctor. Regularly scheduled appointments help increase the likelihood of finding a treatable recurrence, as can keeping an eye out for signs that the cancer has come back. The symptoms of a potential recurrence that you should discuss with your doctor include:

- Frequent urination
- Weak or interrupted urine flow
- Blood in the urine
- The urge to urinate frequently at night
- Blood in the seminal fluid
- Pain or burning during urination, which is much less common
- Pain in the back, hips, thighs, shoulders, or other bones
- Unexplained weight loss
- Fatigue

PSA testing. PSA testing is recommended every six to 12 months for the first five years after treatment, then every year after that. PSA testing may be recommended more often for some men if they have a higher risk of the cancer coming back or if they are able to have additional treatment intended to cure the
cancer, such as radiation therapy or surgery. Discuss your PSA levels with your doctor. If your PSA level is increasing or your doctor is concerned about your PSA level, he or she may recommend that you visit your prostate cancer specialist to find out whether more testing or treatment is needed.

**DRE.** Talk with your oncologist or the doctor providing your follow-up care about how often a DRE is needed.

### General health and cancer screening recommendations

Men recovering from prostate cancer are encouraged to follow established guidelines for good health and current cancer screening recommendations. Here are general recommendations for men recovering from prostate cancer:

- **Focus on eating more fruits, vegetables, and whole grains.** Eat fewer high-calorie foods and beverages and less saturated fat.
- **Get at least 600 IU of vitamin D each day and no more than 1,200 milligrams of calcium per day from foods.**
- **If you have problems that affect how well your body absorbs nutrients from foods,** consider talking with a registered dietitian.
- **Be physically active for at least 150 minutes each week.**
- **Limit alcohol consumption to no more than two drinks per day.**
- **Quit smoking or using other types of tobacco.**
- **Men who received radiation therapy for prostate cancer may have a higher risk of bladder and colorectal cancers and need more intensive screening.**

Talk with your doctor or other member of your health care team to help you develop an exercise plan, eating plan, and cancer screening schedule that is best for you. In addition, if you smoke or use tobacco, talk with your health care team about resources to help you quit.

### QUESTIONS TO ASK THE DOCTOR ABOUT FOLLOW-UP CARE

- After treatment has ended, what follow-up care should I receive?
- What follow-up tests will I need, and how often will I need them?
- Who will be coordinating my follow-up care?
- How often will I need to see a doctor?
- What is the purpose of these visits?
- What is the chance that the cancer will return?
- What symptoms should I tell you about right away?
- If I move or need to switch doctors, how do I make sure I continue with my recommended follow-up care schedule?

### NOTES:

__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
__________________________________________________________________________________________________
My follow-up care plan

Use this page to help discuss your follow-up care with your doctor and keep track of his or her recommendations. Talk with a member of your health care team if you have any questions.

Need for ongoing (adjuvant) treatment for cancer: □ Yes  □ No

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SCHEDULE OF FOLLOW-UP VISITS

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CANCER SURVEILLANCE OR OTHER RECOMMENDED TESTS

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It is important to continue to see your primary care doctor for all general health care recommended for a person of your age, including screening tests for other cancers, when appropriate. You should also tell your doctor about:

1. Anything that could be a brand new symptom;
2. Anything that continues to be a persistent symptom;
3. Anything you are worried about that might be related to the cancer coming back.

Signs or symptoms to tell the doctor about right away:

__________________________________________________________________________________________________

Possible late- and long-term effects:

__________________________________________________________________________________________________

What concerns do you have as you transition into survivorship?

- [ ] Emotional and mental health
- [ ] Fatigue
- [ ] Fertility
- [ ] Financial advice or assistance
- [ ] Insurance
- [ ] Memory or concentration loss
- [ ] Parenting
- [ ] Physical functioning
- [ ] Sexual health
- [ ] School/Work
- [ ] Stopping smoking
- [ ] Weight changes
- [ ] Other: ________________________

______________________________________________
Active surveillance: Closely monitoring prostate cancer with regular PSA and DRE tests and periodic biopsies. Active treatment only begins if the tumor shows signs of becoming more aggressive or spreading, causes pain, or blocks the urinary tract. Active surveillance is usually preferred for men with a long life expectancy who may benefit from curative local therapy if the cancer shows signs of getting worse.

Adenocarcinoma: The most common type of prostate cancer.

Adjuvant therapy: Treatment given after the main treatment to reduce the chance of cancer coming back by eliminating any remaining cancer cells. It usually refers to chemotherapy, radiation therapy, and/or hormone therapy given after surgery.

Benign: A tumor that is not cancerous. The tumor does not usually invade nearby tissue or spread to other parts of the body.

Benign prostatic hyperplasia (BPH): A non-cancerous condition where prostate cells grow and block the flow of urine; common in older men.

Biopsy: The removal of a small amount of tissue for examination under a microscope. Other tests can suggest prostate cancer is present, but only a biopsy can make a definite diagnosis.

Bone-modifying drugs: Medications used to help strengthen bones and reduce pain and fractures (bone breaks) from bone metastases.

Brachytherapy: Radiation treatment given using small radioactive “seeds” or pellets placed inside the body near the tumor. Also called internal radiation therapy.

Castration: Stopping the normal functioning of the testicles. Medical castration refers to the use of drugs to suppress the function of the testicles so they do not produce hormones.

Castration-resistant prostate cancer: Prostate cancer that is able to grow without male sex hormones; resistant to hormone therapy.

Cells: The basic units that make up the human body.

Chemotherapy: The use of drugs to destroy cancer cells.

Clinical trial: A research study that involves volunteers. Many clinical trials test new treatments and/or prevention methods to find out whether they are safe, effective, and possibly better than the current standard of care, which is the best known treatment.

Computed or computerized axial tomography (CT or CAT) scan: An imaging technique that creates a 3D picture of the inside of the body using an x-ray machine. A computer then combines these images into a detailed cross-sectional view that shows any abnormalities or tumors.

Cryosurgery (cryotherapy or cryoablation): Freezing prostate cancer cells with a metal probe inserted through a small incision in the area between the rectum and the scrotum.
**Cure:** To fully restore health. This term is sometimes used when a cancer has not returned for at least five years after treatment. However, the concept of “cure” is difficult to apply to cancer because undetected cancer cells can sometimes remain in the body after treatment, causing the cancer to return later. Recurrence after five years is still possible.

**Digital rectal examination (DRE):** A test in which the doctor inserts a gloved, lubricated finger into a man’s rectum and feels the surface of the prostate for any irregularities.

**External-beam radiation therapy:** Radiation therapy given from a machine located outside the body.

**Gleason score:** The most commonly used prostate cancer grading system. The score is based on how much the prostate cancer cells looks like healthy tissue when viewed under a microscope.

**Gynecomastia:** The abnormal growth of breast tissue by men; a possible side effect of hormone therapy.

**Hormone therapy:** Treatment that removes or blocks hormones to destroy or slow the growth of cancer cells. Also called androgen ablation, androgen-deprivation therapy, or castration.

**Imaging test:** A procedure that creates pictures of internal body parts, tissues, or organs to make a diagnosis, plan treatment, check whether treatment is working, or observe a disease over time.

**Intensity-modulated radiation therapy (IMRT):** A type of radiation therapy that uses CT scans to form a 3D picture of the prostate before treatment so high doses of radiation can be directed only at the prostate without increasing the risk of damaging nearby organs.

**Invasive cancer:** Cancer that has spread outside the layer of tissue in which it started and has the potential to grow into other tissues or parts of the body. Also called infiltrating cancer.

**Laboratory test:** A procedure that evaluates a sample of blood, urine, or other substance from the body to make a diagnosis, plan treatment, check whether treatment is working, or observe a disease over time.

**Late effects:** Side effects of cancer treatment that occur months or years after treatment has finished.

**Learning resource center:** A location in a hospital or cancer center where patients and families can get information about health related topics and learn about support resources. Also called a health or hospital library.

**Localized cancer:** Cancer that is confined to the area where it started and has not spread to other parts of the body. Also known as noninvasive cancer.

**Lymphatic system:** A network of small vessels, ducts, and organs that carry fluid to and from the bloodstream and body tissues. Cancer can spread to other parts of the body through the lymphatic system.

**Malignant:** Refers to a tumor that is cancerous. It may invade nearby healthy tissue or spread to other parts of the body.

**Metastasis:** The spread of cancer from the place where it began to another part of the body. This occurs when cancer cells from the primary tumor travel through the blood or the lymphatic system to the lymph nodes, brain, lungs, bones, liver, or other organs.

**Neoadjuvant therapy:** Treatment given before the main treatment. It may include chemotherapy, radiation therapy, or hormone therapy given before surgery to shrink a tumor so it is easier to remove.
**Oncologist:** A doctor who specializes in treating cancer. The five main types are medical, surgical, radiation, gynecologic, and pediatric oncologists.

**Orchiectomy:** Surgery that removes one or both testicles.

**Palliative care:** Any form of treatment that concentrates on reducing a patient’s symptoms or treatment-related side effects, improving quality of life, and supporting patients and their families. Also called supportive care or symptom management.

**Pathologist:** A doctor who specializes in interpreting laboratory tests and evaluating cells, tissues, and organs to diagnose disease.

**Primary site:** The area in the body where a cancer started.

**Prognosis:** Chance of recovery; a prediction of the outcome of a disease.

**Prostate specific antigen (PSA):** A protein made by the prostate gland and found in the blood. PSA levels in the blood may be higher than normal in men who have prostate cancer, benign prostatic hyperplasia (BPH), or infection or inflammation of the prostate gland (prostatitis).

**Psychosocial effects:** Emotional and social concerns related to cancer and cancer treatment that can greatly affect a person’s well-being. These may include lack of information and support; emotional difficulties, including depression and anxiety; lack of transportation; disruptions to work, school, and family life; and insufficient financial resources.

**Quality of life:** An overall sense of well-being and satisfaction with life.

**Radiation therapy:** The use of high-energy x-rays or other particles to destroy cancer cells. Also called radiotherapy.

**Recurrence:** Cancer that has returned after a period during which the cancer could not be detected. Local recurrence means that the cancer has come back in the same general area where the original cancer was located. Regional recurrence refers to cancer that has come back in the lymph nodes or other tissues near the original cancer site, usually by direct spread. Distant recurrence refers to cancer that has come back and has spread to other parts of the body, usually by traveling through the lymphatic system or bloodstream.

**Regimen:** A treatment plan that includes which treatments and procedures will be done, medications and their doses, the schedule of treatments, and how long the treatment will last.

**Response:** Shrinkage of the cancer as a result of chemotherapy, radiation therapy, hormone therapy, or other type of treatment.

**Risk:** The likelihood of an event.

**Screening:** The process of checking whether a person has a disease or has an increased chance of developing a disease when the person has no symptoms.

**Secondary cancer:** Describes either a new primary cancer (a different type of cancer) that develops after treatment for the first type of cancer or cancer that has spread to other parts of the body from the place where it started. See metastasis.

**Side effect:** An undesirable result of treatment, such as fatigue, incontinence, or impotence.

**Stage:** A way of describing where the cancer is located, if or where it has spread, and whether it is affecting other parts of the body.
Standard of care: Care that experts agree or research shows is the most appropriate and/or effective for a specific type or stage of cancer.

Surgery: The removal of cancerous tissue from the body during an operation.

Survivorship: This term means different things to different people. Two common definitions include having no disease after the completion of treatment and the process of living with, through, and beyond cancer.

Survivorship care plan: A personalized schedule of follow-up examinations and tests that the doctor recommends after a patient’s active treatment period. This may include regular physical examinations and/or medical tests to monitor the patient’s recovery for the coming months and years. It is often used in conjunction with a treatment summary. Also called a follow-up care plan.

Tumor: A mass formed when healthy cells change and grow uncontrollably. A tumor can be cancerous or benign. A cancerous tumor is malignant, meaning it can spread to other parts of the body. A benign tumor means the tumor will not spread.

Treatment summary: A written summary of the therapy(ies) that the patient had during the active treatment period. This is often used in conjunction with a follow-up care plan to help monitor a survivor’s long-term health.

Transrectal ultrasound (TRUS): A diagnostic test in which the doctor inserts a probe into the rectum that takes a picture of the prostate using sound waves that bounce off the prostate. This procedure is usually done at the same time as a biopsy.

Transurethral resection of the prostate (TURP): A surgical procedure most often used to relieve the symptoms of a urinary blockage, not to treat prostate cancer. A surgeon inserts a narrow tube with a cutting device called a cystoscope into the urethra and then into the prostate to remove prostate tissue.

Watchful waiting: Watchful waiting involves less intensive monitoring than active surveillance. It includes periodic PSA tests, DRE tests, and/or watching for symptoms. Watchful waiting is usually recommended for much older patients or those with other serious or life-threatening illnesses.

For more definitions of common terms you may hear before, during, and after treatment, visit www.cancer.net/cancerbasics.
ASCO Answers Guides

ASCO Answers Guides feature comprehensive information about the diagnosis, treatment, side effects, and psychosocial effects of a specific cancer type, as well as practical information for patients and families. Topics include:

• Breast Cancer
• Colorectal Cancer
• Non-Small Cell Lung Cancer
• Small Cell Lung Cancer
• Prostate Cancer
• Survivorship
• Caregiving

ASCO Answers Fact Sheets

ASCO Answers Fact Sheets provide a one-page (front and back) introduction to a specific type of cancer or cancer-related topic. Each includes an overview, illustration, terms to know, and questions to ask the doctor. Cancer.Net has 65 fact sheets available (including some in Spanish), covering adult and childhood cancers, diagnosis and treatment, and side effects. Some available titles are:

• Kidney Cancer
• Acute Lymphocytic Leukemia
• Appetite Loss
• Understanding Chemotherapy

ASCO Answers Booklets

ASCO Answers Booklets provide in-depth, practical guidance on specific topics in cancer care. Learn about:

• Advanced Cancer Care Planning
• Managing the Cost of Cancer Care
• Managing Your Weight After a Cancer Diagnosis
• Palliative Care
• Stopping Tobacco Use After a Cancer Diagnosis

For Patients and Caregivers: If you are interested in additional educational materials, visit www.cancer.net/ascponses to find all of our available materials in electronic format.

For Oncology Professionals: Bulk quantities are available for purchase. Bundled versions are also available for purchase. Bundles include guides for oncology professionals and patient guides. Available bundles cover survivorship, weight management, and tobacco cessation. Visit www.cancer.net/estore or call 1-888-273-3508 to place your order. To request free promotional materials for your practice, please send an email to contactus@cancer.net.

Looking for Other Patient Information Resources?

Cancer.Net offers a variety of guides, booklets, and fact sheets to help patients learn more about their disease and treatment.

WE WANT TO HEAR FROM YOU

If you found this material helpful or if you have comments or suggestions about how they could be better, please let us know at contactus@cancer.net.