



Prostate Cancer Treatment Options

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Prostate Cancer Treatment

If you've been diagnosed with prostate cancer, you have time to learn about your prostate cancer treatment options before starting treatment. Most prostate cancer grows very slowly and most men with prostate cancer will die of something else. There are many treatments for prostate cancer. What's best for you depends on:

- The stage of your cancer (how much cancer is in the body)
- Your age
- Your overall health
- Your personal preferences

Men diagnosed with prostate cancer that hasn't grown outside the prostate may live for many years. It's important to think about both the benefits of each treatment and your quality of life after treatment.

Continue reading our guide below to learn more about various prostate cancer treatments, or click on the table of contents below to jump directly to the section that interests you most:

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Before Starting Prostate Cancer Treatment

Many men with prostate cancer have more treatment than they need. This can lead to severe and lifelong side effects such as urinary incontinence or erectile dysfunction (impotence). Some research has shown that you must treat 48 men with prostate cancer to save one life, so a very large proportion of men undergoing definitive therapy (surgery, radiation) are treating disease that would likely never kill them. Some men are under-diagnosed, and don't get enough treatment

Start with an Accurate Diagnosis

A [customized prostate health evaluation](#) will ensure the most accurate staging of your cancer. Traditional tests and biopsies often either under-diagnose the stage and grade of prostate cancer or scare men into having unnecessary treatment. Research has shown that a traditional trans-rectal biopsy will miss around 40 percent of significant prostate cancers.

New [prostate cancer biomarker tests and our 3D biopsy](#) are the most accurate way to stage prostate cancer.

Get a Second Opinion

If you've been diagnosed with prostate cancer somewhere else, getting a [second opinion](#) helps turn panic to peace of mind. A second opinion will:

- Confirm your prostate cancer diagnosis
- Ensure you get the information you need to choose the best treatment(s) for you
- It is very common for people diagnosed with cancer to get a second opinion. Your doctor will not mind if you do this.

Get Help Sorting through Your Options

Once you have an accurate diagnosis, we help you sort through the treatment options that are appropriate for you.

Treatments for Prostate Cancer

Treatments for prostate cancer include:

- Active surveillance (also called watchful waiting)
- Radiation therapy
- Surgery
- Targeted focal cryotherapy (also called cryosurgery)
- Hormone therapy

Other less common treatments (usually for more advanced prostate cancers) are:

- Chemotherapy
- Bone-directed treatment

Learn more about these other treatment options.

Active Surveillance for Prostate Cancer

Prostate cancer often grows very slowly, so some men might never need treatment. Active surveillance, which is also called "watchful waiting," means monitoring the cancer closely, but not actively treating it.

Active surveillance involves:

- Monitoring PSA levels
- Doing standard 12 core biopsies to see if cancer has grown or spread

A Gleason score of 3+3=6 is currently the lowest grade prostate cancer that exists, and men rarely if ever die as a result of this type of cancer. However, since prostate cancer is a disease that can occur in more than one area of the prostate (called a "multi-focal disease") it is important to get fully tested before deciding to undergo active surveillance.

We also recommend [3D prostate biopsy](#) if you choose active surveillance, to ensure that your diagnosis is accurate. Up to 40 percent of men on active surveillance have more cancer or more aggressive cancer than originally diagnosed.

If your test results change, we'll talk to you about treatment options.

When to Consider Active Surveillance

Active surveillance is most appropriate for:

- Older men
- Men with other serious health problems
- Men with very slow-growing cancers

Risks and Side Effects of Active Surveillance

Without an accurate diagnosis and proper follow-up, there is a risk that cancer which may be hiding won't be treated when treatment is necessary. Active surveillance has very few side effects.

Prostate Cancer Surgery

Many men choose prostate surgery to try to cure cancer that hasn't spread outside the prostate. While prostate cancer surgery is an effective treatment for many men, some men who have surgery don't need it. The main type of prostate cancer surgery is called a radical prostatectomy, where the surgeon removes the prostate gland and some of the tissue around it. There are two main ways to do prostate cancer surgery:

- Open prostate surgery
- Robotic-assisted prostate surgery

All prostate cancer surgery is done under anesthesia.

Open Prostate Cancer Surgery

In open prostate cancer surgery, the surgeon operates either through the abdomen or the skin between the anus and scrotum (the perineum). Surgery done through the abdomen, which is more common, is called a radical retropubic prostatectomy. Surgery done via the area of skin between the anus and the scrotum (the perineum) is called radical perineal prostatectomy. Dr. Crawford uses an incision under the belly button that's less than 3 inches for open prostate cancer surgery.

Research shows that open and robotic-assisted prostate cancer surgery are equally effective. The major side effects of urinary or erection problems (described below) are also about the same with open and robotic-assisted prostate cancer surgery.

Robotic-Assisted Prostate Cancer Surgery

In robotic-assisted prostate cancer surgery, the surgeon sits at a control panel in the operating room and uses robotic arms to operate. After making several small incisions in the patient's belly, the surgeon inserts small instruments. One of the instruments has a video camera, which the surgeon uses to see inside the body and remove the prostate.

Advantages of robotic prostatectomy over the open approach may include less pain, less blood loss, and a faster recovery.

When to Consider Prostate Cancer Surgery

Surgery may be appropriate for:

- Younger men with Stage II, III, or IV prostate cancer who are in good health except for the cancer

Risks and Side Effects of Prostate Cancer Surgery

Risks of Surgery

The risks of prostate surgery are the same as with any major surgery, including:

- Reactions to anesthesia
- Bleeding
- Blood clots in the legs or lungs
- Damage to nearby organs
- Infections

Side Effects of Prostate Surgery

The major side effects of prostate cancer surgery are:

Urinary incontinence and other dysfunction: You may lose control of your urine or have leakage or dribbling. This can range from minor leakage to a complete loss of control. You may also need to urinate more often or more urgently or have pain when you urinate. Older men who undergo surgery may be at an increased risk for urinary incontinence. For most men, normal bladder control usually returns slowly within several weeks or months after surgery. Older men usually have more problems with incontinence than younger men.

Erectile dysfunction (impotence): You may be unable to get an erection sufficient for sexual penetration. The surgeon will try not to injure the nerves that control erections, but if the cancer is growing into or near these nerves, they would need to be removed. The older you are when you have surgery, the more likely you are to have problems with erections. Similarly, the better your erectile function is before surgery, the better your chances of getting erections after surgery. For many men, the ability to have an erection returns several months or years after surgery. Some men will never be able to have an erection after prostate cancer surgery.

Other possible side effects include:

- Changes in orgasm
- Loss of fertility
- Small decrease in penis length in some men
- Hernia

Recovery after Prostate Cancer Surgery

For about one to two weeks while you heal, you'll have a catheter (thin, flexible tube) in your penis to help drain your bladder. The surgeon puts the catheter in during the surgery. Once the catheter is removed, you'll urinate on your own. Most men stay in the hospital for a few days after surgery. After you go home, your activities will be limited for several weeks.

Targeted Focal Cryotherapy for Prostate Cancer

Targeted focal cryotherapy is a minimally invasive way to destroy prostate cancer while minimizing side effects like incontinence and impotence. It's used for small tumors that haven't spread beyond the prostate (Stage I and II). Cryotherapy (also called cryosurgery or cryoablation) uses very cold temperatures to freeze and kill prostate cancer cells. Focal cryotherapy targets only a small area within the prostate where the cancer is, leaving the healthy parts of the prostate intact. [Targeted focal cryotherapy](#) is an effective alternative to prostate cancer surgery or radiation therapy.

How Targeted Focal Cryotherapy for Prostate Cancer Works

[Prostate cancer](#) is clusters of cancerous cells that can form multiple tumors within the prostate. The doctor maps the exact location and size of each tumor with advanced [3D prostate biopsy](#). Then he uses this information to precisely target only the tumors with targeted focal cryotherapy, with reduced risk of harming the healthy parts of the prostate or surrounding nerves and tissue. Typically, how closer the cancer is found to the sexual nerves dictates how well a patient's erectile function will be in the weeks and months after targeted focal cryotherapy.

During targeted focal cryotherapy, the doctor uses ultrasound and results of the 3D prostate biopsy to guide the needles into the tumors. He inserts the needles through the skin between the anus and scrotum into the prostate. The doctor then passes very cold argon gas through the needles to freeze and destroy the cancer cells. After each freeze cycle, the doctor will use helium gas to thaw the ice ball, which destroys the cellular DNA. This cycle of freezing/thawing is repeated two to three times during your treatment.

[Targeted focal cryotherapy](#) is different than the more common regular cryotherapy. In regular cryotherapy, the doctor doesn't use 3D mapping and the treatment destroys the entire prostate.

Advantages of Targeted Focal Cryotherapy

Compared to prostate cancer surgery and radiation therapy, targeted focal cryotherapy has fewer side effects and lets you recover quicker.

Targeted Focal Cryotherapy Compared to Surgery

After surgery (from any doctor in the nation) about 40 percent of men may be impotent. After targeted focal cryotherapy, if the cancer is not close to the sexual nerves, about 5 percent of men will experience impotence. If the cancer is near both sexual nerves, around 25 percent of men may experience impotence. Much like surgery, the better your sexual function before your treatment, the better your chances of having erections after treatment.

Other advantages of targeted focal cryotherapy over surgery are:

- Permanent incontinence:
 - After targeted focal cryotherapy: Very rare, less than 1 percent overall risk
 - After surgery: Up to 10 percent of men
- Catheter:
 - After targeted focal cryotherapy: About three to five days
 - After surgery: About 14 days
- Pain
 - After targeted focal cryotherapy: Mild to moderate, usually Tylenol is sufficient
 - After surgery: More severe, requiring opioids

- Time in hospital:
 - Targeted focal cryotherapy: Go home the same day
- Surgery: Sometimes released the same day, but usually between one to two days hospital admission
- Return to normal activities:
 - After targeted focal cryotherapy: About seven days for most activities and 10 days for more active activities
 - After surgery: Six to eight weeks

Surgery also causes more infections and complications than targeted focal cryotherapy.

Targeted Focal Cryotherapy Compared to Radiation Therapy

Side effects of targeted focal cryotherapy compared to radiation therapy include:

- Permanent incontinence (urinary and/or fecal [stool] incontinence):
 - After targeted focal cryotherapy: Very rare, less than 1 percent
 - After radiation therapy: Up to 10 percent of men
- Impotence:
 - After targeted focal cryotherapy: 5 to 25 percent of men
 - After radiation therapy: 10 to 90 percent
- Length of treatment:
 - Targeted focal cryotherapy: Two hours, with return home the same day
 - External beam radiation therapy: Five days a week for at least a month. Could be more or less, depending on the type of cancer.

Radiation therapy can also cause bowel problems like diarrhea and fecal incontinence (uncontrolled leakage of stool), fatigue, and lymphedema (swelling and pain in the lymph nodes).

When to Consider Targeted Focal Cryotherapy

About 1 in 4 men with prostate cancer can have targeted focal cryotherapy.

Targeted focal cryotherapy is generally appropriate for:

- Stage I prostate cancer (less than 3 cores positive of Gleason 3+3=6)
- Stage II prostate cancer (less than 3 cores positive of Gleason 3+4=7)
- In some men over the age of 70, targeted focal cryotherapy may be able to be performed in men with a low PSA density (less than or equal to .15) and less than or equal to a Gleason 9 prostate cancer (4+5)

Learn more about [targeted focal cryotherapy](#) and when it is recommended.

Side Effects of Targeted Focal Cryotherapy

Side effects of targeted focal cryotherapy include:

- Incontinence: Rarely permanent
- Impotence: 5 to 25 percent of men, depending on how close the cancer is to the sexual nerves in the prostate

Radiation Therapy for Prostate Cancer

Radiation for prostate cancer uses high-energy rays or other types of radiation to kill cancer cells or keep them from growing. Two basic types of radiation therapy are used to treat prostate cancer:

- External beam radiation therapy
- Brachytherapy

External beam radiation therapy

External beam radiation therapy is a type of radiation for prostate cancer that uses a machine outside the body to send radiation toward the organ of interest, in this case the prostate. This type of radiation for prostate cancer treats the entire prostate gland.

Men usually have external beam radiation therapy five days a week on an outpatient basis for at least several weeks. The number of treatments and the length of time depends on why the radiation is being given and the type of cancer that is being treated.

Brachytherapy

Brachytherapy is a type of internal radiation for prostate cancer. Small radioactive pellets, or “seeds,” each about the size of a tiny grain of rice, are placed into your prostate in the operating room.

Most of the radiation in brachytherapy is to the prostate itself, sparing nearby normal tissues. Brachytherapy is also called seed implantation or

interstitial radiation therapy. Prostate brachytherapy can be permanent (low dose rate, or LDR) or temporary (high dose rate, or HDR). In permanent brachytherapy, the seeds are left in place and give off low doses of radiation for weeks or months.

When to Consider Radiation Therapy

Radiation for prostate cancer may be appropriate:

- As the first treatment for Stage I or II prostate cancer
- As part of the first treatment (along with hormone therapy) for Stage III prostate cancer
- For prostate cancer that couldn't be completely removed or comes back (recurs) after surgical removal of the prostate
- To help prevent or relieve symptoms in advanced prostate cancer

Brachytherapy is usually used:

- Alone in men with Stage I or II prostate cancer
- Along with external beam radiation therapy for some men who have a higher risk of the cancer growing outside the prostate.

Side Effects of Radiation Therapy

Both external beam radiation therapy and brachytherapy can cause these side effects:

Bowel problems, including diarrhea or frequent stools, fecal incontinence (leakage of stool), and loss of control over bowel movements. For most men, these problems go away over time. Rarely do we see bowel function that does not return to normal.

Urinary incontinence and other dysfunction: You may lose control of your urine or have leakage or dribbling. This can range from minor leakage to a complete loss of control. You may also need to urinate more often or more urgently or have pain when you urinate. For most men, normal bladder control returns after radiation therapy. In some men, these problems continue.

Erectile dysfunction (impotence): Problems with erections usually develop slowly after radiation therapy, not immediately after treatment like with surgery. After a few years, the number of men who are impotent is about the same for radiation therapy and surgery. The older you are when you have treatment, or the worse off your sexual function before treatment, the more likely you are to have problems with erections.

Fatigue can last a few weeks to a few months after the final treatment.

Since permanent (LDR) brachytherapy gives off small amounts of radiation for several weeks or months, your doctor may advise you to stay away from pregnant women and small children. You may also be required to stay away from all people for between one and three weeks, depending on the type of seeds that are being used.

Hormone Therapy for Prostate Cancer

Androgens are male sex hormones that cause prostate cancer to grow. The main androgens are testosterone and dihydrotestosterone. Hormone therapy tries to reduce the levels of androgens in the body or to stop them from making the prostate cancer grow. It is also called androgen deprivation or suppression therapy. Hormone therapy often makes the prostate cancer shrink or grow more slowly for a while. But hormone therapy, in some cases, cannot cure prostate cancer.

When to Consider Hormone Therapy

Hormone therapy may be appropriate:

- Along with radiation therapy for men at higher risk of the cancer coming back after treatment
- Before radiation to try to shrink the cancer or prostate and make the radiation more effective
- For men with too much cancer to be cured by surgery or radiation
- For men who can't have surgery or radiation
- If the cancer remains or comes back after treatment with surgery or radiation therapy

Side Effects of Hormone Therapy

Side effects of hormone therapy include:

- Reduced or no sexual desire
- Erectile dysfunction (impotence)
- Shrinkage of testicles and penis
- Hot flashes
- Breast tenderness and growth of breast tissue
- Osteoporosis (bone thinning), which can lead to broken bones
- Anemia (low red blood cell counts)

- Decreased mental sharpness
- Loss of muscle mass
- Weight gain
- Fatigue
- Higher cholesterol
- Depression

Will My Prostate Cancer Spread or Come Back?

How likely your prostate cancer is to spread or come back depends on the [stage](#):

- Stage I: Not likely to spread or come back after treatment (if treated)
- Stage II: More likely than stage I prostate cancer to spread beyond the prostate or come back after treatment
- Stage III: More likely to spread or come back after treatment than earlier stages
- Stage IV: Has already spread widely and is most likely to be fatal

Prostate Cancer Recurrence

When prostate cancer comes back after treatment, this is called a recurrence. This can happen in 30 to 90 percent of men who had high-risk prostate cancer. This number varies in men who have been diagnosed with low and intermediate risk prostate cancer, but is typically much lower.

Prostate cancer can come back many years after treatment. But when it does come back, it can grow more slowly in some cases. However, men with higher risk cancers before treatment may develop the same aggressive types of cancer again after treatment.

Seeing your doctor regularly for follow-up care will help catch any recurrence early.

Follow-up Care After Prostate Cancer Treatment

After you finish your prostate cancer treatment, you'll see your doctor regularly for follow-up exams and tests and to get help with late- or long-term side effects from your treatment. Some side effects from treatment might last a long time or show up years later.

Follow-Up Exams and Tests

Exams and tests may include:

- PSA tests:
 - About every three to six months or so for the first few years after treatment
 - At least once a year after that
- Digital rectal exam if your prostate hasn't been removed
- Bone scans or other imaging tests

Your doctor will recommend a schedule for exams and tests based on the stage of your cancer and the chance it might come back.

Become a Patient

Whether you have a high or low PSA, a positive (or negative) biopsy, or are just concerned about your prostate cancer risk, Precision Prostate Cancer Care can help you:

- Get the most accurate diagnosis, including as a second opinion
- Sort through your treatment options
- Choose and get the best care for you and the stage of your prostate cancer

Through a [customized evaluation](#) and, if needed, a [3D prostate biopsy](#), we can more accurately determine the best treatment option for you. This includes seeing if you're a candidate for targeted focal cryotherapy, a more precise prostate cancer treatment that can help preserve your prostate and your quality of life.

Schedule a [free phone consultation](#) or learn more about [becoming a patient](#).

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