



Radiation for Prostate Cancer

Urology Care
FOUNDATION™
*The Official Foundation of the
 American Urological Association*

WHAT IS RADIATION THERAPY FOR PROSTATE CANCER?

Radiation therapy uses high-energy rays to kill prostate cancer cells. Radiation can be the main treatment for prostate cancer (in place of surgery). It can also be used after surgery.

Radiation is given either externally (outside the body) or internally (inside the body). Sometimes both types are given together. The type offered to you will depend on the stage of cancer, your total health and life expectancy, and your goals for treatment.

WHAT IS EXTERNAL BEAM RADIATION THERAPY?

External beam radiation therapy (EBRT) sends an aimed beam of radiation from outside to the prostate. It is delivered in daily doses for a number of weeks. Your radiation oncologist will try to limit radiation going to healthy organs like the bladder and rectum, to limit side effects.

- **Standard EBRT** uses the photons (x-rays). Your doctor may offer three-dimensional conformal radiotherapy (3DCRT) or intensity-modulated radiotherapy (IMRT) to target the radiation.
- **Proton Beam Therapy (PBT)** uses particles called protons. A machine, called a synchrotron or cyclotron, is used to send radiation deep into body tissue. Protons and photons have been shown to have similar side effects and success rates for treatment of prostate cancer.

- **Stereotactic Body Radiation Therapy (SBRT)** delivers large doses of photon radiation to exact zones of the body over just a few days. SBRT is often known by the names of the machines, like Gamma Knife®, X-Knife®, CyberKnife®, and Clinac®.

WHAT IS INTERNAL RADIATION THERAPY?

With internal radiation, radioactive matter is placed straight into the prostate using a hollow needle. There are two types: low dose rate (LDR) brachytherapy and high dose rate (HDR) brachytherapy.

- **LDR brachytherapy** - is when your doctor puts radioactive “seeds” (the size of a rice grain) into the prostate. These seeds send out radiation, killing nearby cancer cells. In LDR, the seeds are left in the prostate even after treatment is done, and may still release radiation.
- **HDR brachytherapy** - is when your doctor puts radiation into your prostate using a thin tube. The radiation source is only put in for a short time. Once your treatment is done, the material is removed.

Anesthesia is needed to place needles for both LDR and HDR brachytherapy. You may need to stay in the hospital overnight.

Sometimes radiation therapy is combined with hormone therapy to shrink the prostate to treat high-risk cancers.

National Headquarters: 1000 Corporate Boulevard, Linthicum, MD 21090

Phone: 410-689-3990 • Fax: 410-689-3878 • 1-800-828-7866 • info@UrologyCareFoundation.org • www.UrologyHealth.org

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WHO IS A GOOD CANDIDATE FOR RADIATION THERAPY?

Radiation therapy can be a good choice for:

- Men whose prostate cancer is only in their prostate
- Men whose prostate cancer has gone beyond the prostate to nearby organs and tissue, and who are using hormone therapy
- Men who have had their prostate removed but who are at risk for the disease coming back (adjuvant treatment)
- Men whose prostate cancer has recurred (returned after treatment)
- Men with advanced prostate cancer who wish to reduce symptoms caused by the tumor

WHAT ARE THE BENEFITS AND RISKS OF RADIATION THERAPY?

The main benefit of radiation therapy is that it's not surgery. Whether it is given externally or internally, this care is helpful for early stages of prostate cancer. On the other hand, some of the newer methods may be hard to find, or are very costly.

The most common side effects of radiotherapy are urinary and bowel problems. Urinary problems often get better over time, but in some men, they never go away. Erectile dysfunction, along with impotence, is also likely. Many men also feel tired for a few weeks to months after treatment.

If hormone therapy is used along with radiation, sexual side effects are more common. This can include loss of sex drive, hot flashes, weight gain, feeling tired, decreased bone thickness and depression. These side effects can be managed. They most often go away gradually when hormone therapy is stopped.

OTHER CONSIDERATIONS

It helps to work with your radiation oncologist before you start treatment to be ready for side effects that may happen. Follow-up visits with your healthcare team will help you address any new problems, early.

Talk to your doctor about which treatment is right for you.

ABOUT THE UROLOGY CARE FOUNDATION

The Urology Care Foundation is the world's leading urologic foundation – and the official foundation of the American Urological Association. We provide information for those actively managing their urologic health and those ready to make health changes. Our information is based on the American Urological Association resources and is reviewed by medical experts.

To learn more, visit the Urology Care Foundation's website, UrologyHealth.org/UrologicConditions or go to UrologyHealth.org/FindAUrologist to find a doctor near you.

DISCLAIMER

This information is not a tool for self-diagnosis or a substitute for professional medical advice. It is not to be used or relied on for that purpose. Please talk to your urologists or health care provider about your health concerns. Always consult a health care provider before you start or stop any treatments, including medications.

For copies of printed materials about Prostate Cancer and other urologic conditions, visit UrologyHealth.org/Order or call 800-828-7866.

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