HORMONE **THERAPY**

Depending on your cancer, you may benefit from adding hormone therapy to radiation.

- Tumors need hormones to grow. Hormone therapy works to block your hormone production, including testosterone, to keep the tumor from getting bigger. This may make your radiation therapy treatments work better.
- Hormone therapy may be given by your radiation oncologist or a medical oncologist.
- It may be used together with radiation therapy or before radiation to shrink the tumor.
- The length of time you will receive hormone therapy depends on your cancer. Ask your doctor for more information. Side effects of hormone therapy can include hot flashes, mild breast tenderness, diarrhea, nausea and tiredness.

CARING FOR YOURSELF **DURING TREATMENT**

- Get plenty of rest during treatment, and don't be afraid to ask for help.
- Follow your doctor's orders. In many cases, your doctor may ask you to call if you develop a fever of 101* or higher.
- Ask if you are unsure about anything. There are no stupid questions.
- Tell your doctor about any medications or vitamins you are taking, to make sure they are safe to use during radiation therapy.
- Eat a balanced diet. If food tastes funny or if you're having trouble eating, tell your doctor, nurse or dietician. They might be able to help you change the way you eat.
- Treat the skin exposed to radiation with special care. Stay out of the sun, avoid hot or cold packs, only use lotions and ointments after checking with your doctor or nurse and clean the area with warm water and mild soap.
- Battling cancer is tough. It does not make you weak to seek out help from support groups and friends.

LEARNING ABOUT **CLINICAL TRIALS**

The radiation oncology team is constantly exploring new ways to treat cancer through studies called clinical trials. Today's standard radiation therapy treatments are a result of clinical trials completed many years ago. For more information, ask your doctor or contact the National Cancer Institute at 1-800-4-CANCER or visit **www.cancer.gov/clinicaltrials**.

ABOUT THE **RADIATION ONCOLOGY TEAM**

Radiation oncologists are the doctors who oversee the care of each person undergoing radiation treatment. Other members of the treatment team include radiation therapists, radiation oncology nurses, medical physicists, dosimetrists, social workers and nutritionists. For information on what each of these professionals does or to locate a radiation oncologist near you, visit **www.rtanswers.org**.

HELPFUL WEB SITES ON **PROSTATE CANCER**

National Prostate Cancer Coalition
www.fightprostatecancer.org

Prostate Cancer Foundation
www.prostatecancerfoundation.org

Radiation Therapy Answers
www.rtanswers.org

Us TOO International Prostate Cancer Education and Support Network
www.ustoo.org

ABOUT **ASTRO**

The American Society for Radiation Oncology is the largest radiation oncology society in the world with more than 10,000 members who specialize in treating cancer with radiation therapies. ASTRO is dedicated to improving patient care through education, clinical practice, advancement of science and advocacy.

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CARING FOR YOURSELF **NOTES/QUESTIONS FOR YOUR DOCTOR**

RADIATION THERAPY FOR **PROSTATE CANCER**

Facts to Help Patients Make an Informed Decision

ASTRO
TARGETING CANCER CARE
AMERICAN SOCIETY FOR RADIATION ONCOLOGY

FACTS ABOUT **PROSTATE CANCER**

- Prostate cancer is the most common cancer in American men.
- The American Cancer Society estimates that one in every six men will develop prostate cancer in his lifetime.
- According to the American Cancer Society, about 186,000 men were diagnosed with prostate cancer in 2008.

Prostate cancer is very manageable and often curable. More than 98 percent of men with prostate cancer will live more than five years after diagnosis.

TREATING **PROSTATE CANCER**

If you find out you have cancer, you should discuss your treatment options with a radiation oncologist, a cancer doctor who specializes in treating disease with radiation therapy, and a urologist, a surgeon who specializes in the urinary tract. Prostate cancer treatment options include:

- Surgery – a surgeon, usually a urologist, surgically removes the tumor.
- External beam radiation therapy – a radiation oncologist directs high energy radiation to kill the cancer cells.
- Prostate brachytherapy – a radiation oncologist surgically implants high energy radiation seeds to kill cancer cells.
- Hormone therapy – an oncologist gives medication to stop the production of hormones that help tumors grow.
- Chemotherapy – a medical oncologist prescribes medication to kill cancer cells.
- Cryosurgery – an oncologist freezes the tumor.

Sometimes a combination of treatments is best for your cancer, such as surgery followed by external beam radiation. Some men can safely postpone treatment and watch it closely until treatment is needed. This is called watchful waiting or active surveillance.

EXTERNAL BEAM **RADIATION THERAPY**

External beam radiation therapy (also called radiotherapy) involves a series of daily treatments to accurately deliver radiation to the prostate. There are several ways to deliver external beam radiation. Recently completed research trials have shown that increasing the dose of radiation can be done safely with improvement in outcome and avoidance of significant side effects.

- Before treatment, you will have a scan to allow the radiation oncologist to target the radiation on the cancer. Usually several radiation beams are combined to shape, or "conform", the radiation to the prostate cancer. This technique is called **three-dimensional conformal radiation therapy** or **3D-CRT**. Tailoring each of the radiation beams to accurately focus on the tumor allows doctors to target the prostate cancer while keeping radiation away from nearby organs such as the bladder or rectum.
- Some doctors use a type of 3D-CRT called **intensity modulated radiation therapy** or **IMRT**. IMRT allows doctors to change the intensity of the radiation within each of the radiation beams, allowing doctors to safely increase the amount of radiation to the prostate. Sometimes this is done with image guided radiation therapy (IGRT), a technique using direct visualization of the prostate anatomy before each daily treatment..
- In a few clinics in the country, **proton beam therapy** is used to treat prostate cancer. Proton therapy is a form of external beam radiation that uses protons rather than photons (X-rays) to treat cancer cells. Proton therapy is precise like IMRT only it uses proton radiation instead of photons.
- Each of these treatments is acceptable. With all external beam therapy, painless radiation treatments are delivered in a series of daily sessions, each about 15 minutes long, Monday through Friday, for six to 10 weeks. The duration of your treatment will depend on your health and the type of radiation used.

Comparative size of radioactive seeds

PROSTATE **BRACHYTHERAPY**

Prostate brachytherapy involves treating the cancer by inserting radioactive sources directly into the gland. This is usually the only radiation therapy you will need, but it is occasionally combined with external radiation.

- **Permanent seed implants** (sometimes called seed implants or low-dose-rate (LDR) brachytherapy) are given by inserting small metal seeds of radioactive iodine or palladium directly into the prostate gland under anesthesia during a brief outpatient surgery procedure. (Outpatient surgery means you can go home shortly after surgery.) The seeds are temporarily radioactive and deliver the radiation to the prostate over several weeks. After losing their radioactivity, the seeds remain in the prostate.

  The seeds are then harmless and should not bother you. For the short time that the seeds are giving off radiation, men are asked to not hold small children or pregnant women because of the very, very small chance that the radiation may harm their rapidly growing bodies. Ask your radiation oncologist or oncology nurse if you need more specific instructions or if you have any concerns about pets or family members.

- **High-dose-rate prostate implants** deliver radiation to the prostate with a few treatments using a single small radioactive iridium source on the end of a computer controlled flexible wire. The radiation is given through narrow tubes called catheters inserted into the prostate by your radiation oncologist. You will be under anesthesia and will not feel any pain. The tubes remain in place for only one or two days. Once the treatment is complete, the tubes and the radioactive source are taken out. After this type of radiation, you will not need to take special precautions around others.

POSSIBLE SIDE EFFECTS **OF RADIATION FOR PROSTATE CANCER**

- An occasional side effect reported from radiation is mild fatigue. This usually starts in the middle of treatment and may last a few weeks after treatment ends.
- Urinary frequency, discomfort on urination or bowel irritation are common side effects of both external and internal radiation. Medication may help control these symptoms during treatment and they should go away completely a few months after treatment ends.
- Impotence is also a possible side effect of any treatment for prostate cancer. Fortunately, many patients who receive radiation therapy for prostate cancer are able to maintain sexual function.
- Don't be shy about talking to your doctor about your sex life. If you are having problems, talk to your doctor or oncology nurse. He or she may be able to suggest remedies or prescribe medication.
- External beam radiation may cause mild skin irritation. Clean the area regularly with mild soap and warm water. Avoid perfumes, lotions, deodorants or powders unless specially recommended by your nurse. Try not to use products with alcohol and avoid putting anything hot and cold on the area.
- Some side effects can be controlled with medications and changes to your diet. Tell your doctor or nurse if you experience any discomfort so they can help you feel better.