

# Prostate Cancer Answers

## High-Dose Rate Brachytherapy Curative Treatment for Prostate Cancer

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### WHAT IS BRACHYTHERAPY?

“Brachytherapy” comes from a Greek root meaning “from a short distance.” It is the practice of treating cancer by placing a radioactive source(s) directly into the cancer tissue. Multiple catheters are placed within the prostate and a single radioactive source moves sequentially in and out of each catheter treating the area at risk from the inside out.

There are two versions of brachytherapy available:

- permanent seed implants
- temporary implants

Gamma West Cancer Services offers both LDR (low-dose rate) permanent seed brachytherapy and HDR (high-dose rate) temporary brachytherapy. We perform over 500 of these implants per year making us one of the biggest brachytherapy clinics in the United States. HDR is less familiar to some physicians (and patients) than permanent seeds, but in treatment centers that offer both technologies, HDR tends to be used more frequently. Gamma West is renowned for its success in treating prostate, breast and other cancers using brachytherapy. This is a highly specialized field where experience is critical. Gamma West physicians have



successfully performed thousands of these procedures.

### PROSTATE CANCER FACTS

- Prostate cancer is the most common cancer, excluding skin cancer, and the second leading cause of cancer-related death in men in the United States
- Many prostate cancers are slow growing and have a fairly benign course. Some prostate cancers are very aggressive
- About 200,000 cases per year are diagnosed in the United States
- Almost one third of all cancers diagnosed in men are of prostate origin
- Lifetime risk is one in six
- Prostate cancer is more common in men than breast cancer is in women

### SCREENING FOR PROSTATE CANCER

#### Prostate-Specific Antigen (PSA) blood test

- A very useful screening test to diagnose prostate cancer in earlier stages
  - Patients should discuss annual PSA screening with their physician after age 50, or earlier if they have a family history of prostate cancer
- #### Tissue Biopsy
- Biopsies are performed when a PSA test or a medical examination suggest a higher risk of prostate cancer

### MOST COMMON TREATMENT OPTIONS

#### Surgery (or radical prostatectomy

– **total removal of the prostate – is likely curative BUT ONLY if the cancer is organ confined)**

- Surgery alone is an inadequate treatment for prostate cancers that extend into the extraprostatic tissues, seminal vesicle or regional lymph nodes

#### Radiation Therapy

##### External Beam Radiation Therapy

- Treatment is delivered from outside the body using a high energy x-ray machine. The patient undergoes daily radiation treatments for about two months
- Careful treatment planning and delivery is needed to limit the dose to the immediately adjacent rectum and bladder

##### Brachytherapy

- The most conformal way to deliver radiation to the prostate – conformal radiation treatments deliver a higher dose of radiation to the cancer while the dose to the surrounding tissues is minimized

### WHY HDR BRACHYTHERAPY?

HDR Brachytherapy allows the physician to more precisely control the dose delivery within the prostate gland, and the doctor is able to more accurately limit the dose to the surrounding normal tissue. The patient is not radioactive after treatment with HDR brachytherapy.

### BENEFITS OF HDR BRACHYTHERAPY

The HDR radioactive source is thousands of times more active

than a permanent seed. HDR implants treat a wider area around the prostate than seeds, including the seminal vesicles and much of the peri-prostatic fat, so the "safety margin" of the treatment is greater. HDR brachytherapy delivers a very high radiation dose in a very short period of time which is especially important for those tumors that we feel may be faster growing. Urinary side effects are relatively short and no radiation precautions need to be followed because HDR is a temporary implant.

Robert Stephenson M.D., Professor and Jon M. Huntsman Chair of Urological Oncology, at the Huntsman Cancer Institute compared quality of life in our permanent seed patients (who had favorable or low-risk disease) to our HDR patients (who had high-risk disease). **Quality of life scores were superior with HDR, despite the fact that their disease was**

**worse and their treatment more aggressive, primarily because the urinary side effects were less and of shorter duration.** Partly because of this data, the use of HDR has now become a very attractive treatment option for those with early favorable disease as well.

### MAKING AN INFORMED TREATMENT DECISION

**Gammawest.com provides educational materials and videos presented by our physicians.**

Additionally, it will be important for you to meet and discuss your diagnosis and treatment options with medical professionals dedicated to effectively treating, and in many cases, curing prostate cancer. These medical professionals include radiation oncologists and surgeons. Speaking with other prostate cancer survivors can also provide a great deal of hope and support, along with practical information on what to expect. **Gamma West can help**

**you connect with other men who have utilized HDR brachytherapy as their curative treatment for prostate cancer.**

### DR. ROGER HANSEN

Dr. Hansen is a native of Salt Lake City, UT. He earned a B.S. degree in Medical Biology from the University of Utah in 1992, and his Doctor of Medicine degree from Creighton University School of Medicine in 1995 where he graduated with Honors. He completed an internship in Internal Medicine at LDS Hospital in Salt Lake City and then trained from 1996-2000 in Radiation Oncology at the University of Arizona, a National Cancer Institute (NCI) designated Comprehensive Cancer Center. Dr. Hansen is board certified in Radiation Oncology by the American Board of Radiology.

For more information or to schedule a consult with Dr. Hansen, please contact us at [www.gammawest.com](http://www.gammawest.com) or 801-475-4571.

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