

# PROTON THERAPY FOR PROSTATE CANCER

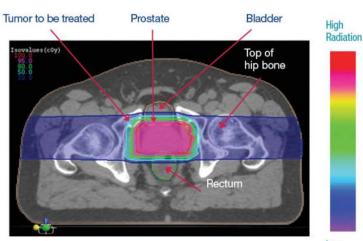
#### **Precision Therapy. Fewer side effects.**

Proton therapy is an advanced form of radiation cancer treatment that precisely targets tumors. Because this precision causes less damage to healthy tissue, proton therapy patients experience fewer side effects than with standard X-ray radiation. Proton therapy is effective in treating a broad range of tumors including prostate, brain, head and neck, central nervous system, lung, sarcoma, gastrointestinal and many pediatric cancers.

Compared to other forms of radiation therapy, proton therapy lowers radiation to surrounding critical structures such as the rectum and the bladder by as much as 60%. Men treated with proton therapy have a lower risk of side effects such as impotence and incontinence. 1,3

# **Prostate tumor treatment with protons.**

With proton therapy, the rectum and the bladder receive much less radiation compared to X-rays/IMRT.



Grey/white area indicates no radiation exposure.

#### Most men with prostate cancer are candidates for proton therapy, depending on the stage of the prostate cancer and the

Particularly effective in treating prostate cancer.

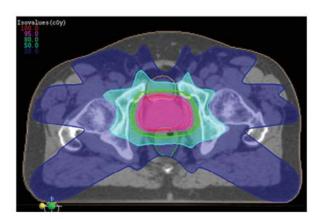
general health of the patient. Prostate cancer is typically treated with surgery, standard X-ray radiation therapy, or radioactive seeds (brachytherapy). However, to minimize damage to the bladder and rectum, which are near the prostate, the total dose of radiation that a patient can receive is often limited.

Proton therapy offers an excellent radiation treatment option. With protons, a higher dose can be delivered directly to the tumor site, which can result in better tumor control while largely sparing the bladder and rectum from radiation damage.1 Studies have reported that proton therapy is as effective as X-ray radiation therapy but results in fewer and less severe side effects such as impotence and incontinence.3

- 1. Vargas C, Fryer A, Mahajan C, et al. Dose-Volume comparison of proton therapy and intensity-modulated radiotherapy for prostate cancer. Int. J. Radiat, Oncol. Bio. Phys. 2008;70(3):744-51
- Slater, J.D.; Yonemoto, L.T.; et al. Proton therapy for prostate cancer: The initial Loma Linda University experience. Int. J. Radiat. Oncol. Biol. Phys. 2004, 59 (2), 348-352
- 3. Hoppe, B.S.; Henderson, R; et al. Early outcome following proton therapy for prostate cancer in men 55 years and younger. Int. J. Radiat. Oncol. Biol. Phys. 2010, 78 (3),

## **Prostate tumor treatment with X-rays/IMRT.**

With X-rays/IMRT, more healthy tissue around the tumor receives radiation. The extra dose to healthy tissue from X-ray radiation therapy can be as much as several hundred thousand dental X-rays.



Colored area indicates radiation exposure



# FREQUENTLY ASKED QUESTIONS ABOUT PROTON THERAPY

## What is the difference between Proton Therapy and other forms of radiation treatment?

Proton therapy and x-ray radiation therapy (such as IMRT, TomoTherapy, or Cyberknife) can both kill cancer cells, but unlike x-rays, protons go directly into the tumor and then stop. This allows protons to target the tumor while reducing damage to surrounding healthy tissue.

#### Is Proton Therapy proven?

The first cancer patient was treated with proton therapy in 1954 and nearly 200,000 patients have been treated worldwide. There are over 300 research papers outlining the clinical benefits of proton therapy. Many of the world's top cancer centers use protons to treat cancer and leading industry groups such as American Society for Radiation Oncology (ASTRO) and the National Comprehensive Cancer Network (NCCN) recommend the use of protons for many different cancers.

#### Is Proton Therapy covered by insurance?

Proton Therapy is covered by Medicare and most private insurance plans. The Oklahoma Proton Center has financial counselors who will guide you through the insurance process. Please contact us if you have questions about your insurance coverage.

#### **Can Proton Therapy be used with other treatments?**

Proton Therapy can be used in conjunction with other treatments such as chemotherapy, surgery, or immunotherapy. The doctors at Oklahoma Proton Center work closely with specialists at other facilities to help coordinate these treatments.

# **LEADERS IN CANCER CARE**

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# How do I know if I am a candidate for Proton Therapy?

Most patients with solid tumors can benefit from proton therapy's ability to deliver more radiation to the tumor and less radiation to healthy tissue. The doctors at Oklahoma Proton Center have many years of experience treating with all types of radiation and will carefully consider the best option for each patient at consult. It is important to speak with a radiation oncologist who actively treats with proton therapy to get the most complete information about its use for your particular cancer.

#### What services are available if I have to travel from out of town?

We have a dedicated concierge team that can help coordinate travel arrangements for out of town patients. We have partnerships with a number of hotels and extended stays in Oklahoma City with preferred rates, and we also partner with American Cancer Society to assist with accommodations for patients who may have financial hardship.

## **ABOUT OKLAHOMA PROTON CENTER**

The Oklahoma Proton Center was the 6th proton center in the U.S. when it opened. It remains one of 30 centers in the country and one of just 5 in the Southwest. The clinical team is one of the most experienced in the country having successfully treated thousands of patients from across the U.S. over the past decade. Many of the techniques used today in other proton centers were developed at the Oklahoma Proton Center.

The facility is adjacent to the INTEGRIS Cancer Institute (ICI), one of the preeminent cancer centers in the region. The doctors at Oklahoma Proton Center work closely with their colleagues at ICI to provide a multi-disciplinary team approach to care. Patients often receive services at both facilities which are coordinated by the Oklahoma Proton Center.

Our goal is to provide great care focused on a patient's overall well-being throughout their cancer journey. We offer a number of services and activities besides the proton therapy treatment itself designed to maximize the healing process. These include patient lunches, group chat sessions, social events, support from former patients, educational seminars, nutritional and wellness counseling and more.



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