Proton Therapy for Patients with Prostate Cancer

Talk to your doctor about how Proton Therapy can help you.

Precision Therapy.
Very low risk of long-term side effects.

Proton Therapy is an advanced form of radiation therapy that precisely targets the tumor utilizing proton particles. Proton particles stop inside the body and do not deposit radiation beyond the tumor they are targeting, causing less damage to healthy tissue. Proton therapy is effective in treating a broad range of tumors including brain, prostate, head and neck, central nervous system, lung, breast, sarcoma, gastrointestinal and many pediatric cancers.

Particularly effective in treating prostate cancer

Most men with prostate cancer are candidates for proton therapy, depending on the stage of the cancer and the general health of the patient. Prostate cancer can be treated with surgery, standard X-ray therapy, or radioactive seed implantation (brachytherapy). However, to minimize damage to the bladder and rectum, which are near the prostate, the total dose of radiation that can be delivered to the prostate cancer is limited. Studies have shown that treatment with proton therapy results in excellent rates of cancer control with very low rates of serious bowel or bladder complications. [2]

Compared to other forms of radiation therapy, proton therapy reduces the amount of radiation given to surrounding critical organs such as the rectum and bladder by as much 60%. [1] Men treated with proton therapy have a very low risk of long-term side effects.

Visit **ProtonBenefits.com** for more information.

Prostate Clinical Benefits

4.9% higher overall 5 year survival rate

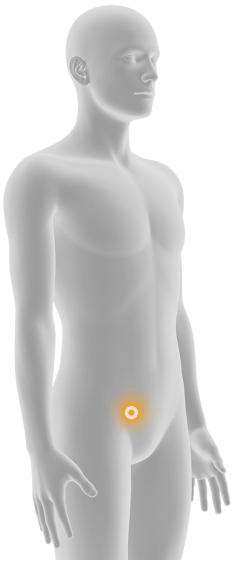
35% less radiation to bladder and **59% less radiation** to the rectum

Proton patients are almost twice as likely to report **treatment had NO IMPACT on their quality of life** compared to surgery, conventional radiation, and brachytherapy

Half as many incidences of long term (2+ years) moderate or severe bowel problems

42% reduction in relative risk of developing a secondary malignancy

Significantly fewer reports of gastrointestinal, genitourinary, endocrine, or "other" complications



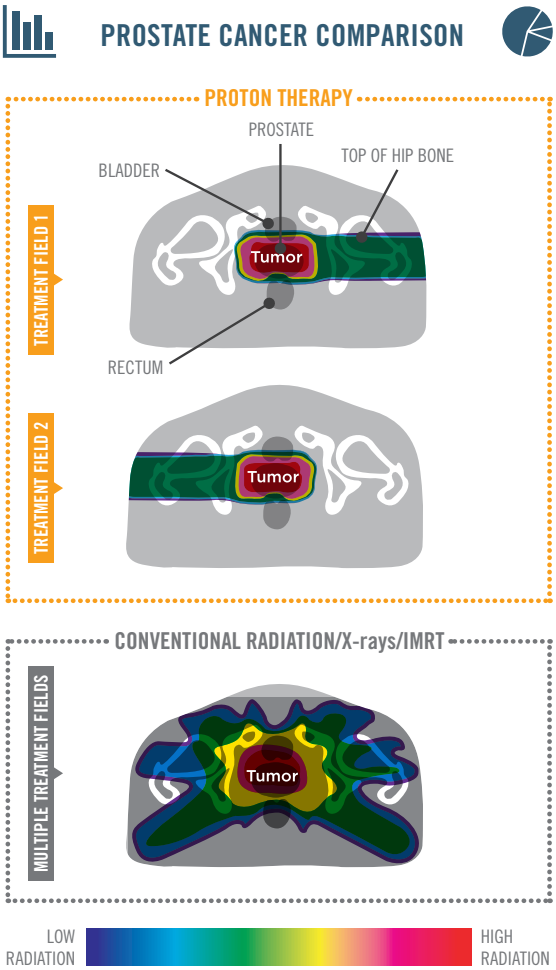
**References available upon request. Results from separate studies compared in some instances. The benefits of proton therapy for each individual patient will vary based on their individual diagnosis. A personal consultation with a proton-experienced radiation oncologist is recommended in all cases.*

PROTON THERAPY BENEFITS

Prostate cancer treatment with protons compared to treatment with conventional radiation/X-rays/IMRT

With proton therapy, the rectum and bladder receive much less radiation compared to conventional radiation/X-rays/IMRT. Men treated with proton therapy have a very low risk of long-term side effects, such as incontinence, bowel damage and sexual funcation.

In the chart below, the grey/white areas indicate no radiation exposure, while the colored areas indicate radiation exposure.



[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. Biol. Phys. 2008; 70(3): 744-51

[2] Zietman AL, Bae K, Slater JD, et al. Randomized trial comparing conventional-dose with high dose conformal radiation therapy in early-stage adenocarcinoma of the prostate: long term results from proton radiation oncology group/american college of radiology 95-09. J. Clin. Oncol. 2010; 28(7): 1106-111

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