

Ready to start planning your care? Call us at [800-525-2225](tel:800-525-2225) to make an appointment.

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Memorial Sloan Kettering
Cancer Center

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[Radiation therapy \(external beam\)](#)

Hypofractionated radiation therapy
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Everyone's prostate cancer is different. The radiation therapy that's best for you depends on the type of cancer you have. We use radiation therapy alone, or with hormone therapy. In some cases, radiation therapy is the primary treatment and is a better option than surgery. In other cases, we use radiation therapy after surgery.



Radiation oncologist Christopher Crane, pictured in Memorial Sloan Kettering's Linear Accelerator Treatment Suite.

Our radiation oncologists (cancer doctors) are always working to improve outcomes after treatment. MSK patients may be able to join our research studies, known as [clinical trials](#), that test new radiation therapy treatments. When you join a clinical trial, you may have access to new methods not yet widely available.

Why Choose MSK

We are ranked #1 in the nation for Urology Cancer Care by *U.S. News & World Report*.

We have a large team of medical physicists developing, refining, and fine-tuning your personalized treatment plan to ensure it is as precise as possible.

The doctors, nurses, and therapists caring for you all specialize in prostate cancer.

Our imaging techniques ensure we deliver the safest, most targeted treatment possible.

We have the most experience in all forms of radiation therapy for prostate cancer. In fact, we pioneered the field of brachytherapy.

We offer a faster and more-effective alternative to CyberKnife called MSK Precise™

Request an Appointment

Call [800-525-2225](tel:800-525-2225)

Available Monday through Friday, 8 a.m. to 6 p.m. (Eastern time)

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Types of Radiation Therapy to Treat Prostate Cancer

Our doctors will work with the rest of your care team to help you choose treatments best for you. Radiation therapy is used for most cancer stages, from early-stage tumors to more advanced prostate cancer. There are 2 kinds of radiation therapy, internal and external:

Internal radiation therapy is when we implant something inside your body, such as radioactive seeds.

External radiation therapy takes place outside your body. This kind of therapy uses high-energy rays to damage cancer cells so it's hard for them to grow.

An example of internal radiation therapy is [brachytherapy](#) (BRAY-kee-THAYR-uh-pee). These procedures are outpatient treatments done under anesthesia, so you'll be asleep. You can go home the same day. MSK doctors were among the first to offer this form of treatment.

External beam radiation therapy (EBRT) uses a treatment machine called a linear accelerator. It aims a beam of radiation directly to the prostate. The beam passes through your body and destroys cancer cells in its path. You won't see or feel the radiation. MSK uses EBRT to treat localized tumors. These are tumors that are only inside the prostate. If the prostate cancer has spread, we combine EBRT with brachytherapy or other therapies.

MSK uses 3 kinds of EBRT to treat prostate cancer:

Image-guided, [intensity-modulated radiation therapy \(IG-IMRT\)](#).

Hypofractionated radiation therapy ([MSK Precise™](#)).

[Proton therapy](#), which uses charged particles called protons to kill cancer cells.

Image-Guided, Intensity-Modulated Radiation Therapy (IG-IMRT)

+

MSK Precise™

+

Proton Therapy

+

How Do I Choose Which Radiation Therapy Is Right for Me?

Deciding which radiation treatment is best for you can be confusing. We're here to help. Before we make a recommendation, our team of radiation oncologists will evaluate your situation. They will look at how aggressive and advanced the prostate cancer is. They will ask you about your quality-of-life choices. Here is information about the treatments we usually recommend for 3 common prostate cancer conditions.

Radiation Therapy for Localized Prostate Cancer

+

Radiation Therapy after Prostatectomy

+

Radiation Therapy for Metastatic Prostate Cancer

+

Managing Side Effects of Radiation Therapy

Radiation therapy at MSK is very precise, so there is less risk of complications. MSK doctors are working on new ways to accurately target a tumor so there are even fewer side effects. MSK was one of the first cancer centers to use an MR linear accelerator to treat people with prostate cancer. This machine lets doctors use magnetic resonance imaging to deliver radiation therapy.

However, radiation can cause short-term side effects and long-term side effects. Side effects depend on the area that was treated and whether organs were in the path of the radiation's beam.

Bowel and Bladder Problems

+

Erectile Dysfunction

+

Fatigue

+

Selected Publications

Zelevsky MJ, Poon BY, Eastham J, et al. [Longitudinal assessment of quality of life after surgery, conformal brachytherapy, and intensity-modulated radiation therapy for prostate cancer](#). Radiother Oncol. 2016 Jan 9. pii: S0167-8140(15)00668-4.

Kohutek ZA, Weg ES, Pei X, et al. [Long-term Impact of Androgen-deprivation Therapy on Cardiovascular Morbidity After Radiotherapy for Clinically Localized Prostate Cancer](#). Urology. 2016 Jan;87:146-52.

Hathout L, Folkert MR, Kollmeier MA, et al. [Dose to the bladder neck is the most important predictor for acute and late toxicity after low-dose-rate prostate brachytherapy: implications for establishing new dose constraints for treatment planning](#). Int J Radiat Oncol Biol Phys. 2014 Oct 1;90(2):312-9.

Zelevsky MJ, Shasha D, Branco RD, et al. [Prophylactic sildenafil citrate improves select aspects of sexual function in men treated with radiotherapy for prostate cancer](#). J Urol. 2014 Sep;192(3):868-74.

Spratt DE, Zumsteg ZS, Ghadjar P, et al. [Comparison of high-dose \(86.4 Gy\) IMRT vs combined brachytherapy plus IMRT for intermediate-risk prostate cancer](#). BJU Int. 2014 Sep;114(3):360-7.

Polkinghorn WR, Zelevsky MJ. [Improving outcomes in high-risk prostate cancer with radiotherapy](#). Rep Pract Oncol Radiother. 2013 Nov 11;18(6):333-7.

Kollmeier MA, Fidaleo A, Pei X, et al. [Favourable long-term outcomes with brachytherapy-based regimens in men ≤60 years with clinically localized prostate cancer](#). BJU Int. 2013 Jun;111(8):1231-6.

PREVIOUS

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