Annotated Bibliography

American Cancer Society. (n.d.). *Radiation therapy for prostate cancer*. <https://www.cancer.org/cancer/types/prostate-cancer/treating/radiation-therapy.html> Radiation therapy uses high energy rays or particles to kill cancer cells. The main types of radiation therapy used for prostate cancer treatment are external beam radiation, brachytherapy (internal radiation), or radiopharmaceuticals (medicines containing radiation that are injected into the body). Each of these types are different in some way but all have the same goal of treating the cancer.

Cancer Resources from OncoLink | Treatment, R. (n.d.). *Cyberknife for prostate cancer*. OncoLink. <https://www.oncolink.org/cancers/prostate/treatments/cyberknife-for-prostate-cancer>

The Cyberknife is a treatment that uses external beam radiation. This machine can deliver stereotactic radiation therapy or SRS and stereotactic body radiation therapy or SBRT. The machine is a linear accelerator on a robotic arm that allows the radiation beam to be delivered form many directions. Unlike the linear accelerator, the Cyberknife tracks the tumor, and the radiation can be directed and delivered accurately based on the motion of the tumor. The Cyberknife gives a higher radiation dose to a smaller area, and this means few fractions are given. The patient only must come every other day for five days instead of coming every day for about thirty days.

Correa, R. J., & Loblaw, A. (2022). Stereotactic body radiotherapy: Hitting harder, faster, and smarter in high-risk prostate cancer. *Frontiers in Oncology*, *12*. <https://doi.org/10.3389/fonc.2022.889132>

Stereotactic body radiotherapy or SBRT is a form of radiation therapy that can effectively treat high- risk prostate cancer. There’s emerging data that is demonstrating its potential to safely and efficiently delivery dose of radiation that can cure the cancer. SBRT treatment hits the cancer harder, faster, and smarter.

Leaver, D., (2021). Prostate cancer: An insider’s perspective. *Radiation Therapist, 30* (2), 183- 201.

The American Cancer Society has classified more than 100 types of cancer that occur in humans. The leading causes of cancer incidence in the United States is prostate cancer in men and breast cancer in women. Prostate cancer grows more quickly in the presence of testosterone. It was though it these hormones were removed then the cancer would go away but that is not the case. There are many factors that affect the grow and development of cancer cells.

Long, B. W., Rollins, J. H., Smith, B. J., & Merrill, V. (2019). *Merrill’s atlas of radiographic positioning and procedures* (14th ed., Vol. 3). Mosby.

Radiation therapy is one of the three principal modalities used in the treatment of cancer. In radiation therapy tumors, lesions, and malignancies are treated with cancericidal dose of ionizing radiation. The radiation dose is prescribed by the radiation oncologist who is a physician that specializes in the treatment of cancer. The goal of radiation treatment is to spare the normal tissue area the affected area but also deliver the dose of radiation precisely to the tumor. There are many types before, during and after radiation treatment that patients should take for the best results of their cancer.

Memorial Sloan Kettering Cancer Center. (1970). *About your fiducial marker and rectal spacer placement*. <https://www.mskcc.org/cancer-care/patient-education/about-placement-fiducial-markers-and-rectal-spacers-radiation-therapy-your-prostate#:~:text=Fiducial%20markers%20are%20tiny%20metal,avoid%20your%20nearby%20healthy%20tissue>.

Cyber knife treatment of the prostate requires patients to have fiducial makers and a rectal spacer placed. Fiducial makers are tiny metal objects that are about the size of a grain of rice. These markers help the radiation therapists line the radiation beam to exactly where the treatment area is. The cyber knife will track the motion of the fiducials to ensure the radiation is being delivered accurately. A rectal space called SpaceOAR will also be placed. This is placed between the patient’s prostate and rectum to move the rectum away from the prostate. This will help protect the rectum from the radiation to limit any side effects from the radiation therapy.

Nasser, N. J., Fenig, E., Klein, J., & Agbarya, A. (2021). Maintaining consistent bladder filling during external beam radiotherapy for prostate cancer. *Technical innovations & patient support in radiation oncology*, *17*, 1–4. <https://doi.org/10.1016/j.tipsro.2021.01.002>

Prostate cancer patients who are receiving radiation therapy treatment should preferably come to treatment with a full bladder and empty rectum. A full bladder can potentially move the small intestines out of the radiation treatment field. The results of this will be decreased small bowel radiation dose and gastrointestinal toxicity.