

# High-dose radiation therapy as effective as surgery for aggressive prostate cancer

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Micrograph showing prostatic acinar adenocarcinoma (the most common form of prostate cancer) Credit: Wikipedia, [CC BY-SA 3.0](#)

A study by researchers at the UCLA Jonsson Comprehensive Cancer Center provides convincing evidence that radiation-based treatments and surgery are equally effective treatments for aggressive prostate cancer. It also suggests that a particular form of radiation therapy, consisting of external radiation followed by brachytherapy (a type of radiation treatment in which a radioactive source is placed into the tumor directly)

provides the best chance of preventing metastatic disease.

This study was the first of its kind to directly compare outcomes between radiation-based treatments and surgery for [patients](#) with cancers that are Gleason score nine or 10 (the highest score possible, which represents the most aggressive form of cancer).

Prostate cancer is the most common form of cancer among men in the United States, with nearly 180,000 new cases expected to be diagnosed in 2016 alone. Therefore, identifying the optimal [treatment strategies](#) for this malignancy is particularly important.

In the past oncologists suggested that surgery and radiation-based treatments offer equivalent outcomes. However, optimal treatment for prostate cancer patients remains controversial, in part because technologies and treatment strategies are continually improving. Both surgery and radiation-based treatments have vocal supporters and detractors within the medical community.

The relative efficacy of these treatments is particularly relevant for the most aggressive forms of prostate cancer, which will most likely lead to [metastatic disease](#) and eventually death. The aggressiveness of prostate cancer is dependent on many factors, one of which is the Gleason score—a grading system of how aggressive the disease appears under the microscope.

Researchers analyzed 487 prostate cancer patients treated for Gleason scores of 9 or 10 prostate cancer between 2000 and 2013 at UCLA, the California Endocrine Therapy Center and Fox Chase Cancer Center. Institutional databases were used to identify patients, and clinical follow up was obtained.

The findings only included advanced prostate cancer patients who were

treated since 2000, because the standard of care for these patients has significantly changed over time, particularly for radiation-based treatments.

"Our study focuses on a particularly aggressive form of [prostate cancer](#), and provides the largest series of outcomes for patients with this diagnosis who were treated in the modern era," said Dr. Amar Kishan, a chief resident in the department of radiation oncology at UCLA. "Our conclusions are relevant to both physicians advising patients about the effectiveness of different treatment options, and patients who would like to learn more about these options on their own."

The treatments received by patients included in the study are much more likely to be similar to treatments being offered to patients at various medical institutions across the world today.

**More information:** Amar U. Kishan et al. Clinical Outcomes for Patients with Gleason Score 9–10 Prostate Adenocarcinoma Treated With Radiotherapy or Radical Prostatectomy: A Multi-institutional Comparative Analysis, *European Urology* (2016). [DOI: 10.1016/j.eururo.2016.06.046](#)

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