Following prostatectomy, the optimal management for patients with an elevated prostate-specific antigen (PSA) level remains unsettled. Prior to the era of PSA testing, many patients received immediate adjuvant radiation treatment based on adverse pathologic features after prostatectomy. However, since the use of PSA monitoring in the postoperative setting, the PSA level has become one of the most specific measures for assessing the presence of residual disease. With factors such as pathologic stage and imaging studies, PSA can be a specific marker of local recurrence in most patients.

In this review, the authors find that through careful case selection, design of treatment, and dose delivery, a complete response, i.e., PSA < 0.1 ng/ml can be achieved with radiation by up to 80% of patients following prostatectomy. These results are achievable with minimal rectal toxicity as well as minimal risk of increasing incontinence. The question still remains as to what is the most appropriate therapeutic option for high risk patients following prostatectomy: whether or not it is reasonable to wait for an elevated PSA prior to proceeding with a course of potentially curable radiotherapy.

Further insight into adjuvant postoperative radiation treatment to prevent local recurrence is followed by three separate editorials which follow the article; the first by James E. Montie, MD at the University of Michigan Section of Urology, the second by Jorge C. Paradelo, MD of Therapeutic Radiologists, Inc., in Kansas City, Missouri, and the third by Mack Roach III, MD, of the Department of Radiation and Medical Oncology at the Mt. Zion Medical Center at University of California San Francisco.