

A cohort of 252 prostate cancer patients treated definitively using radiation therapy between 1995 and 1999 were used to analyze the effects of race and treatment modality on biochemical-failure.

Patient data included race, initial PSA, Gleason score, tumor stage, treatment modality, hormone treatment, and follow-up PSAs. Biochemical-failure was defined as 3 consecutive increases in PSA above the post-RT nadir. Patients were classified as either low, intermediate, or high-risk. Radiation treatment modalities included external-beam, seed-implants, and a combination of both. There were 168 Caucasians(45 seed-implants, 87 external-beam, 36 both) and 84 African-Americans(23 seed-implants, 47 external-beam, 14 both).

We report biochemical-failure for patients with follow-up over 3 years. For the 118/252 patients with hormone treatment, biochemical-failure rates among the Caucasian patients for the 3 modalities are 4.4%, 25.3% and 2.8% respectively. The rates among the African-American patients are 8.7%, 2.1% and 0%. For the 153/252 patients without hormone treatment, biochemical-failure rates among the Caucasian patients for the 3 modalities are 0%, 13.8% and 0%. The rates among the African-American patients are 4.3%, 2.1% and 0% respectively.

With hormone therapy, biochemical-failure occurred most frequently among intermediate/high-risk Caucasian patients treated with external-beam(18/23), more than 10-times greater than for similar African-American patients. When using seed-implants, biochemical failure occurred about twice as frequently among the low-risk African American patients. Without hormone therapy, half of the biochemical-failure cases occurred in the low-risk group treated with external-beam only, with most of the cases occurred in Caucasian patients(12/13). Continued follow-up with quality-of-life surveys and further PSA measurements is ongoing.