Shortened Radiation Therapy Schedule Effective in Patients with Low-Risk Prostate Cancer

BOSTON, MA — NRG Oncology investigators found delivering higher doses of radiation therapy over 13 fewer days than conventional therapy was safe, more convenient for patients, and was associated with lower costs and similar quality of life outcomes for patients with favorable-risk prostate cancer. NRG-RTOG 0415: A Phase III Randomized Study of Hypofractionated 3D-CRT/IMRT Versus Conventionally Fractionated 3D-CRT/IMRT in Patients with Favorable-Risk Prostate Cancer compared standard dose radiation therapy to a radiation therapy schedule that required higher doses in fewer treatments to determine if the effects of the treatment were similar in terms of survival and toxicities that affect quality of life. The results of this trial were presented at the American Society for Radiation Oncology (ASTRO) Annual Meeting on September 26, 2016 in Boston, Massachusetts.

“The primary endpoint of this study was to determine and assess the differences in health-related quality of life between higher doses of radiation over a shorter time period, called hypofractionation, compared to conventional lower dose, longer schedules of radiation therapy in men with low-risk prostate cancer,” says Deborah W. Bruner, PhD, Associate Director of the Winship Cancer Institute of Emory University and the primary quality of life investigator for NRG-RTOG 0415.

NRG-RTOG 0415 randomized 962 patients with low-risk prostate cancer into a conventional (C) schedule of radiation therapy consisting of 3D/IMRT at 73.8 Gy in 41 fractions over 8.2 weeks, or a hypofractionated (H) schedule of 3D/IMRT at 70 Gy in 28 fractions over 5.6 weeks. Quality of life was assessed with the Expanded Prostate Index Composite (EPIC) which measures bowel, bladder and sexual quality of life, at baseline, 6 and 12 months. Baseline characteristics were similar between treatment arms.

Following treatment, men receiving either the H or C fractionation schedules demonstrated similar 12-month bowel, urinary, and sexual function. Patients treated on the H fractionated schedule demonstrated a small, but not clinically significant, decline in bowel quality of life at one year as compared to the C fractionated schedule, thus late toxicity is comparable for bowel, bladder and sexual quality of between arms. With similar outcomes, the shorter course of hypofractionated radiation therapy saves patients time and the inconvenience of travel and will likely decrease costs, an analysis in progress.

“The results of NRG-RTOG 0415 provide the radiation oncology community with a better understanding of the effects on patient quality of life when correlated to radiation dose sizes. This proves that a shortened, larger dose radiation therapy schedule can be equally as effective in treating patients with prostate cancer,” stated Walter J. Curran, Jr., MD, an NRG Oncology Group Chair and Executive Director of the Winship Cancer Institute of Emory University.
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NRG Oncology/RTOG 0415, Phase III Non-Inferiority Study Comparing 2 Fractionation Schedules in Patients with Low-Risk Prostate Cancer: Prostate Specific Quality of Life Results
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