NRG Oncology/RTOG 0126: Higher-Dose Radiotherapy Lowers Risk of Recurrence but Does Not Improve Survival for Men with Prostate Cancer

PHILADELPHIA, PA — Results of a recent NRG Oncology study, NRG Oncology/RTOG 0126, show that high-dose radiotherapy did not improve survival for men with intermediate-risk prostate cancer but did improve biochemical control and rates of distant metastases, when compared to standard radiotherapy. Men who received higher-dose radiotherapy underwent fewer salvage therapies to control tumors that had grown larger or had spread to another body site; however, they also experienced more side effects than did men on the standard radiotherapy treatment arm. This information will be invaluable for doctors and patients when deciding the best treatment course.

Research efforts on this study were led by the Study Chair, Jeff M. Michalski, MD, of the Siteman Cancer Center at the Washington University School of Medicine in St. Louis. This analysis was published in JAMA Oncology on March 15, 2018, and Dr. Michalski was recently interviewed by JAMA Oncology in a podcast regarding the publication.

NRG Oncology/RTOG 0126 is the first study of its kind large enough to examine whether improvement in cancer control from escalating radiotherapy dose could convert into longer overall survival rates for such patients. The trial analyzed 1,499 participants: 748 men were randomly assigned to the experimental radiotherapy arm to receive the higher dose of 79.2Gy in 44 fractions, and 751 men were randomly assigned to the standard radiotherapy arm to receive 70.2Gy in 39 fractions. At the median follow-up time of 8.4 years, there was no difference in overall survival. The 8-year overall survival for patients who received the escalated dose of radiotherapy was 76% and the 8-year overall survival for the standard radiotherapy dose was 75%. There were more late grade 2 or greater gastrointestinal and genitourinary toxicities reported (occurring more than 90 days from start of treatment) for patients on the higher-dose radiotherapy arm (5-year cumulative incidence [GI/GU]: 21%/12% with 79.2Gy versus 15%/7% with 70.2Gy). However, the experimental arm had a lower rate of salvage therapies.

“If we can safely deliver the higher dose of radiotherapy, my opinion is to do that,” Michalski advised. “It does show lower risk of recurrence, which results in better quality of life. But if we can’t achieve those ‘safe’ radiotherapy dose goals, we shouldn’t put the patient at risk of serious side effects down the line by
giving the higher dose. If we can’t spare the rectum or the bladder well enough, for example, we should probably back off the radiotherapy dose. It’s important to develop treatment plans for each patient on a case-by-case basis."

Listen to the podcast of JAMA Oncology’s interview with Dr. Michalski

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Citation:

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NRG Oncology conducts practice-changing, multi-institutional clinical and translational research to improve the lives of patients with cancer. Founded in 2012, NRG Oncology is a Pennsylvania-based nonprofit corporation that integrates the research of the NSABP Foundation, the Radiation Therapy Oncology Group (RTOG), and the Gynecologic Oncology Group (GOG). The research network seeks to carry out clinical trials with emphases on gender-specific malignancies, including gynecologic, breast, and prostate cancers, and on localized or locally advanced cancers of all types. NRG Oncology’s extensive research organization comprises multidisciplinary investigators, including medical oncologists, radiation oncologists, surgeons, physicists, pathologists, and statisticians, and encompasses more than 1,300 research sites located world-wide with predominance in the United States and Canada. NRG Oncology is supported primarily through grants from the National Cancer Institute (NCI) and is one of five research groups in the NCI’s National Clinical Trials Network.