Results of NRG Oncology SBRT Comparison Trial for Lung Cancer Patients Consistent after Long-term Follow-up

SAN DIEGO, CA — Long-term follow-up of NRG Oncology trial RTOG 0915 displayed no excess in late-appearing toxicity and similar primary tumor control in both original study arms. The abstract “Long-term follow-up on NRG Oncology/RTOG 0915 (NCCTG N0927): A Randomized Phase II Study Comparing 2 Stereotactic Body Radiation Therapy Schedules for Medically Inoperable Patients with Stage I Peripheral Non-small Cell Lung Cancer” was presented at the American Society for Radiation Oncology (ASTRO) 59th Annual Meeting in San Diego, California and received a “Best of ASTRO” award for 2017.

NRG Oncology/RTOG 0915 compared two different stereotactic body radiation therapy (SBRT) schedules to determine which would generate a lower protocol-specific adverse event (psAE) rate at one year following treatment for patients with medically inoperable non-small cell lung cancer (NSCLC). Primary tumor control was also evaluated for each arm. Secondary endpoints included primary tumor failure (PTF), local failure, overall survival (OS), disease-free survival (DFS), and progression-free survival (PFS); however, the study was not designed to test the statistical comparisons of these outcomes. Arm one would receive 34 Gy in one fraction whereas arm two would receive 48 Gy in four fractions. At one year follow-up, arm one’s treatment of 34 Gy in one fraction proved to be the least toxic of the schedules and both arms were equally efficacious.

This phase II follow-up analysis reviewed 86 patients from NRG Oncology/RTOG 0915 to see if grade 3, 4, or 5 adverse events had changed since the prior reports. The median follow-up time was 3.8 years for all patients, and 5.1 years for those alive at analysis. Results exhibited no changes for grade 3 or higher treatment-related toxicity and only four patients from arm two (48 Gy/4 fractions) had experienced grade 3 changes in spirometry since the primary endpoint was met.

“At the time of this follow up, since the median survival of four years for each arm suggests a similar efficacy (pending any larger studies appropriately powered to detect survival differences), this update should provide reassurance to clinicians who are considering single-fraction SBRT for their patients who met the trial criteria” stated Gregory Videtic, MD of the Cleveland Clinic in Ohio and the lead author for this abstract.

Distant failure as the sole failure or a component of first failure was higher in arm one (34 Gy/1 fraction) and the rate of second primary development was greater for arm two (48 Gy/4 fractions). In regard to patient deaths, one-third of the deaths occurred from unknown causes whereas another one-third occurred from issues not-related to cancer or treatment.

NRG Oncology/RTOG 0915 was funded by grants from the National Cancer Institute.

Visit NRG Oncology and RTOG Foundation at Booth #3537.

Citation:
Choy H, Bradley JD. Long term follow-up on NRG Oncology RTOG 0915 (NCCTG N0927): A randomized phase II study comparing 2 stereotactic body radiation therapy schedules for medically inoperable patients with stage I peripheral non-small cell lung cancer.

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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 worldwide 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.