Androgen deprivation therapy for two years after radiation therapy improves disease-free survival by 60 percent in patients with advanced prostate cancer

Study analyzes 15-year follow-up of RTOG 9202

San Antonio, October 19, 2015—A long-term follow-up of RTOG 9202 (Hanks 2004) indicates that for patients with locally advanced prostate cancer, an additional 24 months of long-term androgen deprivation (LTAD) therapy after radiation therapy (RT) plus short-term androgen deprivation (STAD) therapy improved disease-free survival (DFS) by 60 percent compared to patients who only received RT plus STAD, according to research presented today at the American Society for Radiation Oncology’s (ASTRO’s) 57th Annual Meeting.

Men with advanced prostate cancer typically receive androgen deprivation (AD) therapy to reduce the level of testosterone in their bodies. Hormone therapy alone cannot cure prostate cancer, however, lowering androgen levels can reduce the size of prostate.

RTOG 9202 was a randomized, multi-institution study of 1,554 patients with locally advanced prostate cancer to evaluate the potential benefits of LTAD compared to STAD. All patients received RT of 44 Gy to 46 Gy to the pelvic lymph nodes and 65 Gy to 70 Gy to the prostate. Patients were
randomized into two groups, with both groups receiving AD for four months—both groups of patients received goserelin and flutamide two months prior to RT and two months during RT. After RT, the STAD group received no additional AD therapy; the LTAD group received goserelin for 24 months.

This study’s analysis indicates that at 15 years follow-up, the LTAD group continued to show favorable outcomes of DFS compared to the STAD group (16 percent vs 10 percent, HR = 0.72, P<.0001). Additionally, the LTAD group had less increase in prostate specific antigen (PSA) levels, compared to the STAD group (cumulative incidence 45 percent vs. 61 percent, HR = 0.57, P<.0001). The incidence of local progression (growth of the cancer in the prostate or immediate area) decreased from 13 percent in the LTAD group compared to 23 percent in the STAD group (HR = 0.53, P<.0001). The spread of the cancer to other areas also decreased among the LTAD group—the distant metastases rate fell to 17 percent for the LTAD group compared to 26 percent for the STAD group (HR = 0.61, P<.0001). The overall survival (OS) for the LTAD group was 30 percent, compared to an OS rate of 27 percent for the STAD group (HR = 0.90, P= .12).

“Our findings reinforce the benefit of longer androgen deprivation therapy for patients with locally advanced prostate cancer,” said lead study author Colleen A.F. Lawton, MD, FASTRO and vice-chair of the department of radiation oncology at the Medical College of Wisconsin. “It is encouraging that 15 years after the initial RTOG 9202 trial, the data continues to emphasize the advantages of LTAD on disease-specific survival, and thus more patients with advanced prostate cancer should be considered for and may benefit from LTAD.”

The abstract, “Duration of Androgen Deprivation in Locally Advanced Prostate Cancer: Long-term Update of NRG Oncology/RTOG 9202” will be presented in detail during a scientific session at ASTRO’s 57th Annual Meeting at 10:45 a.m. Central time on Monday, October 19, 2015. To speak with Dr. Lawton, please call Nancy Mayes on October 18 – 21, 2015, in the ASTRO Press Office at the Henry B. González Convention Center, in San Antonio at 210-258-8104 or 210-258-8104, or email press@astro.org.
ASTRO’s 57th Annual Meeting, being held at the Henry B. González Convention Center in San Antonio, October 18-21, 2015, is the nation’s premier scientific meeting in radiation oncology. The 2015 Annual Meeting is expected to attract more than 11,000 attendees including oncologists from all disciplines, medical physicists, dosimetrists, radiation therapists, radiation oncology nurses and nurse practitioners, biologists, physician assistants, practice administrators, industry representatives and other health care professionals from around the world. Led by ASTRO President Bruce D. Minsky, MD, FASTRO, a radiation oncologist specializing in gastrointestinal cancers, Professor of Radiation Oncology, and the Frank T. McGraw Memorial Chair at The University of Texas MD Anderson Cancer Center, Houston, the theme of the 2015 Meeting is “Technology Meets Patient Care.” Dr. Minsky’s Presidential Symposium, “Multidisciplinary Management of Esophageal and Rectal Cancers,” will feature Leonard L. Gunderson, MD, MS, FASTRO, and Joel E. Tepper, MD, FASTRO, to highlight imaging, staging, genomics and data mining approaches, as well as the latest advances in esophageal and colorectal cancer treatment. ASTRO’s four-day scientific meeting includes presentation of more than 2,100 abstracts: five plenary papers, 351 oral presentations, 1,609 posters and 171 digital posters in more than 53 educational sessions and 26 scientific panels for 20 disease-site tracks. Three keynote speakers will address a range of topics including cancer biology in radiation oncology, the essential roles of a physician, and patient safety: Arul Chinnnaiyan, MD, PhD, Professor and Director, Michigan Center for Translational Pathology; Francisco G. Cigarroa, MD, Past President and Chancellor, University of Texas; and Gerald B. Hickson, MD, Senior Vice President and Assistant Vice Chancellor, Vanderbilt University Medical Center.

ABOUT ASTRO

ASTRO is the premier radiation oncology society in the world, with more than 10,000 members who are physicians, nurses, biologists, physicists, radiation therapists, dosimetrists and other health care professionals who specialize in treating patients with radiation therapies. As the leading organization in radiation oncology, the Society is dedicated to improving patient care through professional education and training, support for clinical practice and health policy standards, advancement of science and research, and advocacy. ASTRO
publishes three medical journals, International Journal of Radiation Oncology • Biology • Physics (www.redjournal.org), Practical Radiation Oncology (www.practicalradonc.org) and Advances in Radiation Oncology (www.advancesradonc.org); developed and maintains an extensive patient website, www.rtanswers.org; and created the Radiation Oncology Institute (www.roinstitute.org), a non-profit foundation to support research and education efforts around the world that enhance and confirm the critical role of radiation therapy in improving cancer treatment. To learn more about ASTRO, visit www.astro.org.

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Duration of Androgen Deprivation in Locally Advanced Prostate Cancer: Long-term Update of NRG Oncology/RTOG 9202

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Purpose/Objective(s): The Radiation Therapy Oncology Group (RTOG) 92-02 trial aimed to determine whether adding 2 years of androgen deprivation (AD) improved the outcome for patients treated with 4 months of AD before and during radiation therapy (RT). This investigation updates findings through 15 years of post-trial entry.

Materials/Methods: Patients with clinical T2c-T4 prostate cancer with no extrapelvic lymph node involvement and prostate-specific antigen (PSA) less than 150 ng/mL were randomized to 4 months of goserelin and flutamide beginning 2 months before RT (short-term AD [STAD]) or this with 24 months of goserelin post-RT (long-term AD [LTAD]). RT was 44 Gy to 46 Gy to the pelvic nodes and 65 Gy to 70 Gy to the prostate. For 1520 protocol-eligible patients, median follow-up is 19.6 years. Endpoints for this analysis included disease-free survival (DFS; the primary endpoint), cumulative incidence of events comprising DFS (PSA failure [nadir+2], local progression, and distant metastases), and mortality endpoints (disease-specific survival [DSS] and overall survival [OS]). Hazard ratios (HR), time to event distributions (DFS and OS), and cumulative incidence (other endpoints) are reported.

Results: At 15 years, the LTAD group continues to show favorable outcomes compared to the STAD group for DFS (16% vs. 10% event free; HR = 0.72, P<.0001), PSA failure (cumulative incidence 45% vs. 61%, HR = 0.57, P<.0001), local progression (13% vs. 23%, HR = 0.53, P<.0001), distant metastases (17% vs. 26%, HR = 0.61, P<.0001), and DSS (84% vs. 78%, HR = 0.67, P=0.002). Other cause mortality risk was not increased (HR 0.99, P=.96), and OS was not different (30% vs. 27%, HR = 0.90, P=.12). For a previously examined subgroup of patients with Gleason score of 8 to 10 (N = 337), all disease-specific endpoints strongly favored LTAD, with a trend toward better OS (21% vs. 17%, HR = 0.81, P=.09).

Conclusion: LTAD compared to STAD for the treatment of locally advanced prostate cancer shows persistent benefits for all disease-specific endpoints through 15 years. To fully assess LTAD, an update of long-term adverse events also will be presented.

Acknowledgments: This project was supported by grants U10CA21661, U10CA180868, U10CA180822, and U10CA37422 from the National Cancer Institute (NCI).