Improved survival shown in early-stage Hodgkin’s Disease patients who receive radiation therapy

Study included more than 41,000 patients across the U.S. from 1998 to 2011

San Francisco, September 14, 2014—Patients with stage I and II Hodgkin’s Disease who receive consolidated radiation therapy (RT) have a higher 10-year survival rate of 84 percent, compared to 76 percent for patients who did not receive RT; and, the data also shows a decrease in utilization of RT, according to research presented today at the American Society for Radiation Oncology’s (ASTRO’s) 56th Annual Meeting.

Researchers evaluated clinical features and survival outcomes among 41,502 patients diagnosed with stage I and II Hodgkin’s Disease from 1998 to 2011 from a prospectively collected database—the National Cancer Data Base (NCDB), which is comprised of cases from 1,500 sites and represents >75 percent of all cancers diagnosed in the U.S. The average patient age was 37 (range: 18 – 90), with a median follow-up of 7.5 years. The association between RT use, co-variables and outcome were assessed in a multivariate Cox proportional hazards model. Survival was estimated using the Kaplan-Meier method.

Multi-agent chemotherapy was administered to 96 percent (39,842) of the patients, and 49 percent (20,441) of patients received a median RT dose of 30.6 Gy. The 10-year overall survival of the entire group was 80.8 percent, with patients receiving RT having a statistically significant improved overall survival rate at 10
years, when compared to those not receiving RT (84.4 percent vs. 76.4 percent; p<0.00001). Additionally, the omission of RT was related to higher rates of salvage transplant procedures performed.

Despite this benefit, the utilization of RT for patients with early-stage Hodgkin’s Disease decreased at the study sites from 56 percent to 41 percent between 1998 and 2011; and in 88.4 percent of the patients, the physician-reported reason given for not administering RT was that it was not part of the planned initial treatment strategy. The research also indicated that RT use was associated with younger patients (≤40 years), who are in a higher socioeconomic status, who had access to health insurance, and who received treatment at comprehensive cancer centers (all p<0.0001).

“Multiple prospective, randomized trials have shown a significant improvement in disease control with the addition of RT, however previous trials were limited by low patient numbers and limited follow-up and thus, were unable to demonstrate an overall survival benefit,” said lead study author Rahul R. Parikh, MD, a radiation oncologist at Mount Sinai Beth Israel and an Assistant Professor of Radiation Oncology at Icahn School of Medicine at Mount Sinai. “This is the largest dataset in this patient population to demonstrate a survival benefit with the addition of RT. Given that the utilization of RT was associated with younger age, insurance status, higher socioeconomic status, and treatment at comprehensive cancer centers, we have highlighted ongoing disparities in Hodgkin’s Disease treatment and it is important that we recognize these findings as potential barriers to care. Given the survival benefit demonstrated in this study, radiotherapy should be included in the combined modality approach of multi-agent chemotherapy followed by consolidation RT in order to maintain high overall survival rates for this curable disease.”

The abstract, “Early-Stage Hodgkin’s Disease: The Utilization of Radiation Therapy and Its Impact on Overall Survival,” will be presented in detail during a scientific session at ASTRO’s 56th Annual Meeting at 3:15 p.m. Pacific time on Sunday, September 14, 2014. To speak with Dr. Parikh, please call Michelle Kirkwood on September 14 – 17, 2014, in the ASTRO Press Office at the Moscone Center in San Francisco at 415-978-3503 or 415-978-3504, or email michellek@astro.org.

ASTRO’s 56th Annual Meeting, to be held at the Moscone Center in San Francisco, September 14-17, 2014, is the nation’s premier scientific meeting in radiation oncology. The 2014 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 G. Haffty, MD, FASTRO, a radiation oncologist specializing in breast cancer, the theme of the 2014 Meeting is “Targeting Cancer: Technology and Biology,” and the Presidential Symposium, “Local-regional Management of Breast Cancer: A Changing Paradigm,” will feature Jay R. Harris, MD, FASTRO, and Thomas A. Buchholz, MD, FASTRO, to highlight recent practice-changing, landmark studies and current developments in the local-regional management of breast cancer. ASTRO’s four-day scientific meeting includes presentation of up to four plenary papers, 360 oral presentations, 1,862 posters and 144 digital posters in more than 50 educational sessions and scientific panels for 20 disease-site tracks. Three keynote speakers will address a range of topics including oncologic imaging, biology and targeting in oncology, and human error and safety concerns: Hedvig Hricak, MD, PhD, Chair of the Department of Radiology and the Carroll and Milton Petrie Chair at Memorial Sloan Kettering Cancer Center; Frank McCormick, PhD, FRS, DSc (hon), Professor Emeritus and the David A. Wood Distinguished Professor of Tumor Biology and Cancer Research of the University of California at San Francisco Helen Diller Family Comprehensive Cancer Center; and Sidney Dekker, PhD, MA, MSc, Professor and Director of the Safety Science Innovation Lab at Griffith University, Brisbane, Australia.

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, dosimetrist and other health care professionals that 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 two medical journals, International Journal of Radiation Oncology • Biology • Physics (www.redjournal.org) and Practical Radiation Oncology (www.practicalradonc.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.

###
2014 American Society for Radiation Oncology (ASTRO) 56th Annual Meeting
News Briefing, Tuesday, September 16, 2014, 2:00 p.m. Pacific time

Scientific Session: Sunday, September 14, 2014, 3:15 pm - 4:45 pm PT, the Moscone Center

1042 Early-Stage Hodgkin's Disease: The Utilization of Radiation Therapy and Its Impact on Overall Survival

Author Block: R. R. Parikh1, J. Yahalom2, J. A. Talcott3, M. L. Grossbard1, L. B. Harrison1, Mt. Sinai Beth Israel Medical Center & Mt. Sinai St. Luke's-Roosevelt Hospitals, Mount Sinai Health System, Department of Radiation Oncology, New York, NY, Memorial Sloan-Kettering Cancer Center, Department of Radiation Oncology, New York, NY, Mt. Sinai Beth Israel Medical Center & Mt. Sinai St. Luke's-Roosevelt Hospitals, Mount Sinai Health System, Department of Hematology-Oncology, New York, NY

Purpose/Objective(s): Standard of care treatment for early-stage Hodgkin's Disease (HD) has included combined modality therapy (CMT) of chemotherapy followed by consolidation radiation therapy (RT), but use of RT has not been universal. The purpose of this large-scale study was to examine the association between RT utilization and overall survival gains over time in early-stage HD.

Materials/Methods: We evaluated clinical features and survival outcomes among patients diagnosed with stage I and II HD from 1998 to 2011 from a prospectively collected database - the National Cancer Data Base (NCDB), comprised of cases from 1,500 sites across the US. The association between RT use, co-variables, and outcome was assessed in a multivariate Cox proportional hazards model. Survival was estimated using the Kaplan-Meier method.

Results: Among the 76,672 patients with HD within the NCDB, a total of 41,502 patients with stage I or II disease were eligible for this study, with a median follow-up of 7.5 years. The median age was 37 years (range: 18-90). Multi-agent chemotherapy was given to 96% of the patients. Of the cohort, 20,441 (49%) received RT to a median dose of 30.6 Gy. The 10-year overall survival of the entire cohort was 80.8%. Patients who did not receive RT had a 10-year overall survival rate of 76.4% versus 84.4% for those who received RT (p<0.00001). When adjusting for age, stage, co-morbidity, transplant procedure, chemotherapy use, and socioeconomic status, RT use was associated with significantly improved overall survival (HR=0.51; 95% CI, 0.46-0.56, p<0.00001). Utilization of RT was associated with younger age (≤40 years), insured status, higher socioeconomic status, and treatment at comprehensive cancer centers (all p<0.0001). The use of RT decreased significantly from 56% to 41% between 1998 and 2011. The most common reason given for not administering RT was that it was not part of the planned initial treatment strategy (88.4%). The omission of RT was associated with higher rates of transplant procedures performed, a surrogate for persistent/relapsed disease (p=0.04). Initiating chemotherapy within 30 days after diagnosis was associated with improved overall survival at 10 years (84.5% vs. 78.3%, p<0.00001), even when adjusting for all co-variables (HR=0.86; 95% CI 0.77-0.95, p=0.005).

Conclusions: Our study reveals that patients with early stage HD who received consolidation RT was associated with improved survival. Omitting RT within the CMT program was associated with higher rates of salvage transplant procedures. Despite this data, from 1998 to 2011, there appears to be a significant nationwide decrease in the utilization of RT. To our knowledge, this study represents the largest prospective dataset examining the role of RT for stage I and II HD. The data suggests that CMT contributes significantly to the cure rate for early stage HD, and that RT should remain standard practice.