Intervention closes racial gap and improves treatment rates for early stage lung cancer

Multi-modality NCI-supported project eliminated disparity in treatment rates for African Americans and improved completion of curative care across all patients

BOSTON, September 26, 2016 -- Enhanced, culturally-competent communication with early stage lung cancer patients can narrow racial gaps in curative treatment completion and increase treatment rates for all races, according to research presented today at the 58th Annual Meeting of the American Society for Radiation Oncology (ASTRO). The study, part of a project supported by the National Cancer Institute, found that multiple, coordinated modalities of patient support essentially eliminated the inequity in curative treatment and improved completion of care for all patients.

Due to major breakthroughs in lung cancer screening and treatment, many patients with early stage lung cancer can now be cured with minimal side effects, but disparities negatively impact these potentially high survival rates for vulnerable populations. Many studies have shown, for example, that curative treatment rates for early stage lung cancer are lower for African American patients than for White patients, which contributes to higher death rates for African Americans.

The Accountability for Cancer Care through Undoing Racism and Equity (ACCURE) trial is an NIH-sponsored multi-institutional project designed to reduce racial disparities and increase treatment utilization for early stage lung and breast cancer, especially among African Americans. The ACCURE intervention consists of multiple layers of patient support, including an electronic health record system that signals whenever a patient misses an appointment or anticipated milestone in care; nurse navigators specially trained in race-related barriers to care; presentation of race-specific treatment feedback to care teams; and quarterly health equity training sessions for staff drawing on evidence from community-based...
participatory research.

Findings are based on data from 100 patients with stage I or II lung cancer enrolled into the prospective randomized trial between 2013 and 2015; of these patients, 25 percent were black, compared to a local population rate of 13 percent. Primary outcomes included rates of receiving two potentially curative lung cancer treatments, stereotactic body radiation therapy (SBRT) and surgical resection (R). Rates among study participants were measured against other patient records at the cancer centers involved in the trial. Records for all patients treated between 2007 and 2011 (n = 2,044) served as baseline data, and records for all patients treated between 2014 and 2015 (n = 393) served as a control group. Researchers conducted multivariate analyses to control for Charlson comorbidity score, prognosis (i.e., disease stage I or II) and patient age.

Treatment rates for both surgical resection and SBRT increased for all patients who received the intervention. Among patients in the intervention, 96 percent received resection or SBRT for early stage lung cancer, compared to rates of 64 to 76 percent for the baseline group and 85 to 87 percent for the control group.

The intervention also eliminated the racial disparity in treatment rates for this cohort. Rates of receiving potentially curative treatment were 96 percent for both African American and White patients in the intervention, compared to a gap in baseline rates of 12 percent (i.e., 64 percent for African American vs. 76 percent for White patients).

“The history of racial inequality in healthcare has been long standing. Health disparity has been defined, studied, and accepted for decades, yet these chasms continue to harm large groups of patients,” said Matthew A. Manning, MD, radiation oncologist at Cone Health Cancer Center in Greensboro, North Carolina and lead author of the study. “Our findings show that an evidence-based, strategic intervention can essentially eliminate a racial disparity while improving rates of treatment completion for all races.”

Treatment rates compared to baseline also increased for the control group of all patients at the cancer center (i.e., including those not enrolled in the trial). Researchers attributed this finding to a likely spillover effect, where even patients who were not enrolled in the trial may have benefitted from staff training and other structural or cultural changes at the center.

Age and disease stage significantly impacted treatment rates, but comorbidity affected rates of surgical resection only. Patients younger than age 70 were more likely to receive treatment with SBRT or resection (Odds Ratio (OR), 1.9; p < 0.05), as were those with earlier stage disease (OR, 3.0; p < 0.05). Patients with higher comorbidity scores were less likely to receive resection (OR, 0.66; p < 0.05) but not SBRT.
“As we move into an era of population health, the responsibility for incomplete courses of cancer treatment will shift from the individual patient to the health care delivery system,” said Dr. Manning. “The ACCURE trial represents one of the first studies to demonstrate an intervention to prospectively eliminate racial disparity in cancer treatment. The results suggest that treatment inequity can be closed, not just for African Americans with early stage lung cancer, but for other underserved populations and other types of cancer.”

The abstract, “Reducing Racial Disparities in Treatment for Early Stage Lung Cancer with a Multimodal Intervention,” will be presented in detail during a scientific session at ASTRO’s 58th Annual Meeting at 7:45 a.m. Eastern time on Monday, September 26, 2016. To speak with Dr. Manning, please contact ASTRO’s media relations team on-site at the Boston Convention and Exhibition Center September 25 through 28, by phone at 703-286-1600 or by email at press@astro.org.

ATTRIBUTION TO THE AMERICAN SOCIETY OF RADIATION ONCOLOGY (ASTRO) ANNUAL MEETING REQUESTED IN ALL COVERAGE.

Full study abstract available on the final page of this release.

ABOUT ASTRO’S ANNUAL MEETING
ASTRO’s 58th Annual Meeting, the nation’s premier scientific meeting in radiation oncology, will be held September 25-28, 2016, at the Boston Convention and Exhibition Center in Boston. The 2016 Annual Meeting is expected to attract more than 11,000 attendees from across the globe, including oncologists from all disciplines and members of the entire radiation oncology team. Led by ASTRO president David C. Beyer, MD, FASTRO, the 2016 meeting will feature keynote addresses from Kathleen Sebelius, former U.S. Secretary of Health and Human Services; Thomas James Lynch Jr., MD, Chair and CEO, Massachusetts General Physicians Organization; and Jason Ragogna, general manager, SMS and Safety Alliances, Corporate Safety, Security, and Compliance, Delta Air Lines, Inc. The Presidential Symposium, “Prostate Cancer: Defining Value and Delivering It,” highlights the meeting’s theme of “Enhancing Value, Improving Outcomes” and will feature recent practice-changing studies and current developments in value-based care for prostate cancer. ASTRO’s four-day scientific meeting will feature a record number of abstracts, including 368 oral presentations, 1,760 posters and 180 digital posters in more than 50 educational sessions and 20 scientific panels for 20 disease-site tracks. For more information about ASTRO’s 58th Annual Meeting, visit www.astro.org/AnnualMeeting. For press registration and news briefing information for ASTRO’s 58th Annual Meeting, visit www.astro.org/AMPress.

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, RT Answers (www.rtanswers.org); and created the Radiation Oncology
Institute (www.roinstitute.org), a nonprofit 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.
Reducing Racial Disparities in Treatment for Early Stage Lung Cancer with a Multimodal Intervention

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Purpose/Objective(s): Surgical resection (R) and stereotactic body radiotherapy (SBRT) in early stage lung cancer represent potentially curative treatments. Historically, controlling for age, comorbidities and other important factors, fewer black than white patients undergo either of these treatments. Accountability for Cancer Care through Undoing Racism and Equity (ACCURE) is an NIH sponsored multi-institutional trial testing if a multimodal intervention can reduce racial disparities and increase treatment for all in early stage breast and lung cancer. This study reports the impact of ACCURE on R and SBRT for lung cancer.

Materials/Methods: The ACCURE intervention consists of (1) an automated real time warning system derived from EHR data to signal missed appointments and unmet milestones in expected care, (2) race-specific data feedback on treatment, (3) a nurse navigator trained in race-specific barriers, and (4) quarterly CBPR-based health equity trainings for staff. Baseline data were retrospectively obtained from 2007-2011 as a baseline group (n=2044). Total cancer center population data in 2014-2015 served as a control group (N=393) to account for secular trends and possible spillover effect of the study intervention across the cancer center. Data were analyzed to determine rates of potentially curative treatment (R or SBRT) in each cohort by race. Multivariate analyses were performed to control for the effect of age, comorbidity, and clinical stage.

Results: In 2013-2015, 100 subjects with stage I-II lung cancer were enrolled into the prospective intervention of whom 25% were black (compared to 13% in the cancer centers’ early stage lung cancer population). Crude estimates of overall treatment rates (All RX) are shown in the Table. Overall treatment improved significantly in the enrolled intervention group and control group compared to baseline. The statistically significant treatment disparity also resolved. While the surgical approach was the vehicle of improvement within the intervention cohort, SBRT explained improved care and resolution of disparities in the overall cancer center populations. For overall treatment, age<70 (OR 1.9, 95% CI 1.5-2.3) and, Stage I disease vs. Stage 2 (OR 3.0, 95% CI 2.4-2.8) were associated with treatment while Charlson Comorbidity Score (OR 1.1, 95% CI 0.65-1.8) was not. When R alone was considered, higher Charlson score was associated with less R (OR 0.66, 95% CI 0.50-0.86).

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*p<0.05 compared to baseline

Conclusion: In this study, the ACCURE intervention increased overall treatment and eliminated differences for blacks and whites with early lung cancer. A spillover effect was observed for the total population of participating cancer centers. The difference between R and SBRT in the intervention group compared to the total cancer center population is likely due to differences in comorbid illness.