NRG Oncology Trial Evaluating Adding Metformin to the Treatment of Patients with Locally Advanced Non-Small Cell Lung Cancer Reaches Accrual Goal

Philadelphia, PA—NRG Oncology clinical trial NRG-LU001 successfully reached its accrual goal of 168 patients. NRG-LU001: Randomized Phase II Trial of Concurrent Chemoradiotherapy with or without Metformin Hydrochloride (HCL) in Locally Advanced Non-Small Cell Lung Cancer (NSCLC) is the first clinical trial that seeks to determine whether metformin added to standard, concurrent chemoradiotherapy can improve progression-free survival (PFS) for patients with locally advanced NSCLC. NRG-LU001 initially opened for patient enrollment on August 25, 2014 and over the past 15 months enrolled patients from 80 institutions in the United States, Canada, and Israel.

Metformin is commonly used in the treatment of diabetic patients; however, pre-clinical and retrospective clinical studies have suggested that it may be able to improve the response of epithelial tumors to chemoradiotherapy.

“Metformin modifies carbohydrate and lipid metabolism and mediates in cells a state of mild energy stress. This is shown to lead to inhibition of oncogenes and activation of molecular tumor suppressors,” stated Theodoros Tsakiridis, MD, PhD, FRCPC, a radiation oncologist at the Juravinski Cancer Center in Ontario, Canada and co-principal investigator for NRG-LU001. “We hope that the results of this prospective randomized study will confirm the pre-clinical and retrospective trial results and help us design future trials with metformin.”

NRG-LU001 aims to examine if the connection between metformin and the modification of metabolism can improve chemoradiotherapy responses for patients with stage IIIA or IIIB NSCLC. “If the addition of a commonly used agent like metformin can improve outcomes following a diagnosis of locally advanced NSCLC, this could potentially open the gates to re-purposing drugs currently used for other diseases,” said Heath Skinner, MD, PhD, assistant professor of radiation oncology at the University of Texas MD Anderson Cancer Center in Houston, Texas and co-principal investigator for NRG-LU001. “Additionally, based on pre-clinical data, metformin sensitizes other tumor types to radiation and chemotherapy as well, thus a positive clinical trial in lung cancer could lead to trials in other types of cancer.”

“Thank you and congratulations to the research sites in the United States, Israel, and Canada that enrolled patients on the NRG-LU001 trial. We eagerly await the results of this NRG Oncology trial and the impact it could have for NSCLC patients,” says Walter J. Curran, Jr, M.D., the report’s senior author, NRG Oncology Group Co-Chair, and Executive Director of the Winship Cancer Institute of Emory University in Atlanta.

For more information on this trial, please visit NRG-LU001.
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 National Surgical Adjuvant Breast and Bowel Project, the Radiation Therapy Oncology Group, and the Gynecologic Oncology Group. The research organization 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 1300 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.