Lung cancer patients with minimally invasive adenocarcinoma have comparable 97.7 percent five-year survival rate as patients with adenocarcinoma in-situ

Chicago, October 30, 2014—Lung cancer patients with minimally invasive adenocarcinoma (MIA) have similar, positive five-year disease-free survival (DFS) and overall survival (OS) rates as patients with adenocarcinoma in-situ (AIS), according to research presented today at the 2014 Chicago Multidisciplinary Symposium in Thoracic Oncology. The Symposium is sponsored by the American Society of Clinical Oncology (ASCO), the American Society for Radiation Oncology (ASTRO), the International Association for the Study of Lung Cancer (IASLC) and The University of Chicago Medicine.

Lung adenocarcinoma accounts for 60 percent of all non-small cell lung cancers and is the most common form of lung cancer in both smokers and non-smokers and patients younger than 45 years old. Bronchioloalveolar carcinoma is a type of adenocarcinoma that affects the cells lining the alveoli (small air sacs) of the lungs. Invasion occurs when the tumor extends beyond the alveolar lining and evokes a fibroblastic stromal response. These types of tumors, if \( \leq 3 \) cm in size, are reclassified as AIS (no tumor invasion) or MIA (\( \leq 0.5 \) cm of tumor invasion), according to the 2011 IASLC/American Thoracic Society /European Respiratory Society (IASLC/ATS/ERS)

www.thoracicsymposium.org
International Multidisciplinary Classification of Lung Adenocarcinoma. This study examines the difference in DFS and OS rates for patients with diseases classified as AIS and MIA and determines if it is beneficial to categorize tumors according to additional sub-types.

The study authors conducted a comprehensive search of studies published from 2011 to 2014 in the MEDLINE®, Embase and Cochrane databases. Studies selected for analysis provided survival outcome data for at least eight cases classified as AIS or MIA based on the 2011 IASLC/ATS/ERS classification. Excluded studies did not report survival information. A systematic analysis of DFS and OS data was performed using the random effect model of the Comprehensive Meta Analysis (Version 2.2) software.

The study’s analysis included information from 18 clinical studies published from 2011 and 2014. (Note: Author-updated data is included in this release vs. the abstract.) The 18 studies included a total of 863 patients, with 451 patients classified as AIS and 344 patients classified as MIA. One study reported survival data on patients (68) with AIS and MIA grouped together. The median age of all patients was 67.5 years old. Sixty-one percent (526) of patients were female, and 43 percent (371) of all patients were smokers. The median tumor size was 1.3 cm.

The five-year DFS and OS rates were not statistically different between patients with AIS and MIA. The five-year DFS rate was 97.7 percent for all patients included in the analysis. The five-year DFS rate was 97 percent in patients with AIS and 96.7 percent in patients with MIA (p=0.34). The five-year OS rate was 97.3 percent for all patients included in the analysis. The five-year OS rate was 97.5 percent in patients with AIS and 96 percent in patients with MIA (p=0.58).

“Some researchers have advocated that AIS and MIA should have separate categorization,” said lead author Madhusmita Behera, PhD, associate director of research in the Department of Hematology and Medical Oncology at Winship Cancer Institute of Emory University in Atlanta. “Our analysis demonstrates that these carcinomas, especially when the tumor is 3 centimeters or less in size, are associated with excellent survival outcomes; therefore, tumor sub-classification into AIS and MIA may not provide additional prognostic information.”
The abstract, “Lung Adenocarcinoma Staging Based on 2011 IASLC/ATS/ERA Classification: A Pooled Analysis Of Adenocarcinoma In-situ (AIS) And Minimally Invasive Adenocarcinoma (MIA),” will be presented during the Poster Viewing Session at 5:00 p.m. Central time on Thursday, October 30, 2014. To speak with Dr. Behera, please call Michelle Kirkwood on October 30 – 31, 2014, in the ASTRO Press Office at the Chicago Marriott Downtown Magnificent Mile at 312-595-3150, or email michellek@astro.org.

The 2014 Chicago Multidisciplinary Symposium in Thoracic Oncology will provide a clinically relevant, multidisciplinary update on the scientific progress in treating thoracic malignancies. The symposium brings together physician specialists and practicing clinicians of the multidisciplinary care team to discuss the evolving management of thoracic cancers. The Symposium integrates scientific abstract presentations with accompanying discussions, poster abstract presentations, as well as “challenging case” presentations in interactive tumor board-style forums. The two keynote speakers for the Symposium are Kenneth Rosenzwieg, MD, FASTRO, of Mount Sinai School of Medicine in New York, and Corey J. Langer, MD, of Abramson Cancer Center in Philadelphia. Dr. Rosenzwieg will discuss the use of mutational analysis to guide systemic therapy; and Dr. Langer will review the cutting edge, lung cancer research presented at recent national meetings – ASCO, ASTRO and STS (Society of Thoracic Surgeons).

###
Lung Adenocarcinoma Staging Based On 2011 IASLC/ATS/ERS Classification: A Pooled Analysis Of Adenocarcinoma In-situ (AIS) And Minimally Invasive Adenocarcinoma (MIA)

Author Block: M. Behera, C. Steuer, A. Gal, T. Owonikoko, F. Khuri, S. Ramalingam, G. Sica, Winship Cancer Institute of Emory University, Atlanta, GA

Purpose/Objective(s): Lung adenocarcinoma accounts for almost 60% of all non-small cell lung cancers. According to the 2011 IASLC/ATS/ERS classification, bronchioloalveolar carcinoma that are ≤ 3 cm in size are reclassified as AIS (no invasion) and MIA (≤ 0.5 cm invasion) with pTis (adenocarcinoma) and pT1(mia) sub-categories being proposed. We conducted a systematic analysis of available data from the literature to evaluate the prognostic differences between AIS and MIA.

Materials/Methods: A comprehensive search of published studies was conducted from electronic databases (MEDLINE, EMBASE, Cochrane) using relevant search criteria. Clinical studies that reported outcomes on at least 8 cases classified as AIS or MIA using the 2011 IASLC/ATS/ERS criteria was selected for this analysis. Studies were excluded if they did not report any survival information. Data was collected on patient demographics, tumor pathology, disease free survival (DFS) and overall survival (OS). A systematic analysis of extracted data was performed using Comprehensive Meta Analysis (Version 2.2) software under the random effect model.

Results: Fourteen studies published between 2011-2014 were eligible for this analysis. A total of 642 patients were included (AIS-296; MIA-278; one study reported AIS+MIA together-68). Median age of the patients was 67.5 years (females-61%, smokers-37%). Median tumor size was 1.2 cm. The 5-year DFS rate for the whole population was 97.7%. There was no difference between the 5-year DFS rate between AIS and MIA groups (96.5% vs. 96.6%; p=0.2). The 5-year OS rate for the entire group was 97.9%. The 5-year OS rate for AIS population was equivalent to that of MIA population (97.1% vs. 96.9%; p=0.4). The 5-year DFS and OS rate was 100% in nearly all studies that reported the data.

Conclusions: There are no differences in survival rates when lung adenocarcinoma patients are staged according to the proposed 2011 IASLC/ATS/ERS pTis(adenocarcinoma) and pT1(mia) categories and raises questions regarding the necessity to classify tumors into these sub-types.