

1125-VP-1260 **Jean-Jacques Kengwoung-Keumo*** (jkengwou@cameron.edu), Department of Mathematical Sciences, Cameron University, Lawton, OK 73505. *Racial and Gender Disparities in Incidence of Lung and Bronchus Cancer in the United States: A Longitudinal Analysis.*

Certain population groups in the United States carry a disproportionate burden of cancer. This work models and analyzes the dynamics of lung and bronchus cancer age-adjusted incidence rates by race (White and Black), gender (male and female), and prevalence of daily smoking in 38 U.S. states, the District of Columbia, and across eight U.S. geographic regions from 1999 to 2012. Between 1999 and 2012, age-adjusted incidence rates in lung cancer have decreased in all states and regions. However, racial and gender disparities remain. Whites continue to have lower age-adjusted incidence rates for this cancer than Blacks in all states and in five of the eight U.S. geographic regions. Disparities in incidence rates between Black and White men are significantly larger than those between Black and White women, with Black men having the highest incidence rate of all subgroups. Assuming that lung cancer incidence rates remain within reasonable range, the model predicts that the gender gap in the incidence rate for Whites would disappear by mid-2018, and for Blacks by 2026. This longitudinal model can help health professionals and policy makers make predictions of age-adjusted incidence rates for lung cancer in the U.S. in the next five to ten years. (Received September 15, 2016)