ASP-CHEST Foundation of the American College of Chest Physicians Geriatric Development Research Award

AWARD RECIPIENT

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PROJECT

"Establishing Chronic Obstructive Pulmonary Disease in Older Persons""

MENTORSHIP TEAM

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In general, older persons, are burdened by high rates of smoking exposure as well as life-long exposure to environmental pollutants that can result in adverse cardiopulmonary outcomes, such as chronic obstructive pulmonary disease (COPD). Given its association with high rates of disability and mortality, COPD presents a serious public health challenge. Nevertheless, the current standard for establishing COPD, as published by the Global Initiative for Obstructive Lung Disease (GOLD), has serious limitations in older persons. First, GOLD establishes COPD based on a forced expiratory volume in 1 second (FEV1) to forced vital capacity (FVC) ratio less than 0.70, a cutoff that runs the risk of misidentifying COPD in older persons. Second, GOLD stages COPD severity based on the FEV1 expressed as percent predicted, a method of reporting pulmonary function that lacks an empirical basis in older persons.

To address the above concerns, we have developed a new spirometric strategy for establishing and staging COPD in older persons. We propose that the diagnostic cutoff for the FEV1/FVC ratio be based on mortality risk and that the FEV1 be expressed as a standardized residual percentile, which is then staged as a 5-level measure of pulmonary function. We hypothesize that our spirometric strategy is less likely to misidentify COPD in older persons, while being more likely to accurately stage COPD severity. We plan to rigorously test this hypothesis in a large nationwide probability sample of community-living persons aged 65-80 years, previously recruited in the Third National Health and Nutrition Examination Survey (NHANES III). NHANES III provides high-quality spirometric and clinical data, including measure of health and functional status, and mortality. The results of the proposed research may lead to improvements in patient care and public health policy regarding COPD in older persons.

The ASP-CHEST Foundation of the American College of Chest Physicians Geriatric Development Research Award is an important step in my career development because it will allow me to pursue further training and acquire skills necessary for becoming an independent physician investigator. I am fortunate to be supported by highly qualified mentors who have expertise in research, and in the clinical areas of geriatrics and pulmonary medicine (Thomas M. Gill, MD; H. Klar Yaggi, MD; John Concato, MD; and Peter H.Van Ness, MD). I also have access to the research infrastructure of the Yale Program on Aging, and will undertake course work at the Yale School of Public Health and the Veteran's Affairs Epidemiologic Research and Information Centers.