suggest that exposure to anesthesia and/or surgery could be one of the environmental exposures that increase AD risk through neuroinflammation and neuroapoptosis. However, previous studies indicated substantial disparities in AD risk by gender, ethnicity, and race, but failed to explore the role of anesthesia and/or surgery exposure in the risk for AD. This presentation will review the role of disparities and anesthesia and/or surgery exposure in the risk for AD in elderly surgical patients.

TESTING HEALTH DISPARITIES IN COGNITIVE AND BIOLOGICAL AGING IN OLDER ADULTS IN THE UNITED STATES

Daniel Belsky[1], *1. Columbia University Mailman School of Public Health, New York, New York, United States*

We conducted analysis to test if health disparities in cognitive aging were parallel to or different from health disparities in patterns of aging in other systems in the body, and if race/ethnicity-related disparities could be accounted for by differences in socioeconomic circumstances across the life-course. We analyzed data from more than 10,000 adults participating in the US NHANES and US Health and Retirement Study. We measured cognitive aging using neuropsychological tests of processing speed and memory. We measured aging in other systems using composite indices of biological aging based on organ-system function tests and blood chemistries. We conducted analysis to (i) quantify and compare health disparities in cognitive aging and biological aging; (ii) test if individuals exhibiting accelerated cognitive aging were also exhibiting accelerated biological aging; and (iii) test if race/ethnic disparities in cognitive and biological aging could be explained by measured socioeconomic resource differences in childhood and later life.

MACHINE LEARNING APPROACHES TO ENHANCE CLAIMS DATA ANALYSES

Ricardo Pietrobon,[1] and David Marcozzi[2], *1. SporeData Inc, Durham, North Carolina, United States, 2. University of Maryland, Baltimore, Maryland, United States*

This presentation will cover recent advances in machine learning applied to large claims databases involving medical disparities. First, we will describe methods involving the enrichment of existing claims data with social determinants of health from census data, where variables are imputed from one dataset to another, ultimately resulting in clinical models with enhanced predictive performance. Second, we will discuss the inclusion of variables representing imaging signs from MRI and CT exams, presenting large scalability and interobserver reliability, representing a method that can be used to enrich large state and national registries through the use of image recognition. Finally, we will discuss novel protocols for Natural Language Processing involving a combination of rule-based creation of corpora for radiology and discharge reports, with highly accurate deep learning methods for concept extraction and classification.

GEOGRAPHIC DISPARITIES IN LIFE EXPECTANCY AND MORTALITY IN THE U.S.

Julia Kravchenko,[1] and H Kim Lyerly[2], *1. Duke University School of Medicine, Durham, North Carolina, United States, 2. Duke University Medical Center, Durham, North Carolina, United States*

Although the US has one of the highest per-capita health expenditures in the world, it noticeably lags behind a number of other industrialized countries in terms of life expectancy (LE). These disparities remain unexplained by individual demographic, socioeconomic, and healthcare factors. Analysis of death certificates for 1999-2016 revealed that diseases contributed most to LE variability are myocardial infarction (explained 12.9% of the difference in mortality), heart failure (10.6%), stroke (8.2%), lung cancer (7.5%) and COPD (7.2%). Analysis of histories of diseased patients in Medicare records showed that septicemia (15.7%), low weight (13.8%), renal disease (13.3%), disorders of electrolyte and fluid balance (9.0%) and heart failure (7.3%) contributed most to the disparities. Diseases that substantially contribute to disparities in LE in the US include both common and less-often-discussed diseases. Future studies of variations in treatment patterns, access-to and quality-of medical care for these diseases could provide important insight in observed patterns.

SESSION 2245 (SYMPOSIUM)

M. POWELL LAWTON AWARD LECTURE

Chair: Sharon Inouye, *Harvard Medical School Aging Brain Center, Boston, Massachusetts, United States*

The M. Powell Lawton Award is presented annually to an individual who has made outstanding contributions from applied research that has benefited older people and their care. The lecture will be given by the 2018 recipient, Carol Whitlatch, PhD, Benjamin Rose Institute on Aging. The session will also include the presentation of the 2019 Lawton Award. The 2019 Lawton Award recipient is Barbara Resnick, PhD, CRNP, FGSA, of the University of Maryland. Supported by the Polisher Research Institute of the Madlyn and Leonard Abramson Center for Jewish Life.

FOLLOWING IN THE FOOTSTEPS OF A GREAT APPLIED GERONTOLOGIST (WHILE SIMULTANEOUSLY FORGING YOUR OWN PATH)

Carol Whitlatch[1], *1. Benjamin Rose Institute on Aging, Cleveland, Ohio, United States*

Dr. M. Powell Lawton was an inspirational and productive scholar whose work had application for improving personal care and well-being for older adults and their families. He held strong to the principles of Person- and Family-Centered Care long before this terminology and model of care was commonly practiced. He was a living example of PFCC always wearing comfortable clothes and shoes to ensure his unique creativity was not obstructed by physical discomfort. Dr. Lawton's work has inspired countless gerontologists who have taken the next steps towards ensuring quality of care by understanding personal preferences, activities, and care values. Dr. Whitlatch will discuss Dr. Lawton's ongoing influence on care and best practices focusing on her own research that gives voice to the care values, preferences, and activities of families facing early-stage dementia. Dr. Whitlatch encourages attendees to wear their most comfortable shoes to the lecture in honor of Dr. Lawton.