walk at 1.5mph) categorized as 6-7, 8-9, 10-11 and 12+ and GFR using Cockcroft-Gault. For each fatigability increment, likelihood of suboptimal (GFR=75-89, 21%), diminished (GFR=60-74, 26%) and poor renal function (GFR=15-59, 30%) relative to GFR≥90 was respectively OR(95%CI) p-value 1.51(1.16-1.96).002, 1.38(1.04-1.83).027 and 1.68(1.22-2.31).002 adjusted for demographics, weight, height, smoking, exercise and anemia. Findings were similar for men and women. Perceived fatigability may facilitate identification of apparently well-functioning older adults on the precipice of suboptimal to poor renal function.

ASSOCIATION BETWEEN ARTERIAL STIFFNESS AND FATIGABILITY IN WELL-FUNCTIONING OLDER ADULTS

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The association between vascular health measured by arterial stiffness and fatigability, a marker of future mobility decline, is unknown. We examined 1210 men (47.7%) and women from the Baltimore Longitudinal Study of Aging, mean age 66.6 ± 13.9 years. Perceived fatigability was assessed after a 5-minute, treadmill walk using Borg rating (range 6-20). Arterial stiffness was determined by carotid femoral pulse wave velocity (PWV). In linear regression analyses fatigability and PWV were associated in men (Beta/P-value) (0.160/0.001) and women (0.136/0.008). Adjustment for mean arterial and pulse pressure attenuated the association in women (0.104/0.050) but not men (0.160/0.001). The association was significant among those with slower usual and rapid gait speeds, longer 400m walk time and slower repeated chair stands pace (all p<0.05). Arterial stiffness is associated with a greater proneness to fatigue especially in older adults exhibiting poorer mobility. The underlying mechanisms appear to differ between men and women.

ASSOCIATIONS BETWEEN PERCEIVED FATIGABILITY AND AMYLOID STATUS IN THE BALTIMORE LONGITUDINAL STUDY OF AGING

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Higher level of and greater longitudinal increase in perceived fatigability are linked to cognitive decline and lower brain volumes in older adults. However, it remains unclear whether perceived fatigability is associated with Alzheimer's disease-related brain pathology. In the BLSA, 163 participants without neurological disease or cognitive impairment (aged 74.7+/-8.4 years, 45% men) were assessed for perceived fatigability using rating of perceived exertion after a 5-minute (0.67 m/s) treadmill walk and Aß burden using 11C-Pittsburgh compound B (PiB) positron emission tomography. Forty-four participants were PiB+ based on a mean cortical distribution volume ratio (DVR) cut point of 1.066. After adjusting for demographics, body composition, comorbidities and ApoE-e4, higher perceived fatigability was not associated with PiB+ status (OR=0.84; 95% CI: 0.69, 1.05). Results suggest perceived fatigability may contribute to cognitive decline through pathways other than Aß pathology. Future studies should target other mechanisms linking perceived fatigability and cognitive decline.

LONGITUDINAL ASSOCIATION BETWEEN PERCEIVED FATIGABILITY AND BRAIN VOLUMES IN COMMUNITY-DWELLING OLDER ADULTS

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Perceived fatigability is linked to declining physical and cognitive performance, yet whether fatigability reflects early subclinical change in brain structure is unknown. Using mixed effects models, we assessed the longitudinal association of 3T MRI-derived brain volumes with perceived fatigability after a 5-min treadmill walk (0.67 m/s, 0% grade) using the Borg Rating of Perceived Exertion scale (range 6-20) in 802 BLSA participants (age 68.2+/-12.4 years, 45% men 66% White). In models adjusted for intracranial volume, demographics, chronic conditions, and CESD score, declining gray matter volumes in the frontal (β=-0.01) and temporal (β=-0.02) lobes, as well as the hippocampus (β=-0.25), precuneus (β=-0.10) and thalamus (β=-0.19) were associated with higher fatigability. Larger ventricular volumes were also associated with higher fatigability (β=0.02). Brain atrophy, particularly in gray matter and the hippocampal region, is longitudinally associated with increased fatigability in cognitively normal older adults, making it a potential marker of brain atrophy.

Session 2290 (Symposium)

PROSPECTIVE MONITORING OF NEWLY MARKETED DRUGS IN FRAIL OLDER ADULTS USING REAL-WORLD DATABASES

Chair: Dae Kim
Co-Chair: Elisabetta Patorno

In recent years several new drugs have been approved for treatment of heart failure and type 2 diabetes. Despite their life-prolonging benefits, uptake of new drugs is often slow among older patients with frailty due to under-representation of frail older adults in pivotal clinical trials and concerns for adverse events. To optimize pharmacotherapy, timely evaluation of the drug benefits and risks is urgently needed. We propose a novel drug monitoring framework that prospectively evaluates the effectiveness and safety of newly marketed drugs for frail and non-frail patients in real-world databases. This framework utilizes a validated claims-based frailty index (CFI) (range: 0-1; frail if ≥0.20) to find early signals for effectiveness and safety of new drugs by updating