coffee consumption with the development of dementia in advanced age in a prospective population-based study of 80-years or older residents in Varese province, Italy (Monzino 80-plus Study). **Methods:** Information on coffee drinking (number of cups per day) was obtained with a standardized questionnaire from the subject and/or a primary informant, mostly a family member. Diagnosis of dementia fulfilled DSM-IV criteria. Covariates entered in the fully adjusted logistic and Cox regression models: age, sex, education, current smoking, alcohol consumption, physical activity, BMI, depression, diabetes, hypertension, heart failure, atrial fibrillation, myocardial infarction, ictus, COPD, tea consumption. Former consumers were excluded from cross-sectional (n = 78) and longitudinal (n = 21) analyses. **Results:** The initial population consisted of 2,198 individuals (mean age: 90.2 years; women: 72.7%). Although at first visit prevalence of coffee consumption was lower among individuals affected by dementia (61.7%) compared to non-demented elderly (78.3%; p<0.0001), this difference was no longer significant after adjustment for potential confounders (fully adjusted P = 0.5993). Consumers, on average, drank 1.4 ± 0.8 cups daily. Prevalence of coffee consumption decreased with disease severity: 73.9% in mildly, 71.4% in moderately, 40.5% in severely affected individuals (p<0.0001). Non-demented individuals at first visit with at least one follow-up available were 1,101. In the following 5.5 years, coffee consumers had a lower occurrence of dementia (29.1%) than never-consumers (41.4%; fully adjusted HR: 0.68, 95% CI: 0.52-0.90, P = 0.0080). No significant difference was found between individuals drinking one cup and those drinking two or more cups per day (fully adjusted P = 0.9910), while both groups showed a decreased risk of dementia compared to never-drinkers (respectively, fully adjusted HR: 0.68, 95% CI: 0.51/0.48-0.92/0.96, P = 0.0128/0.0285). **Conclusions:** Long-term coffee consumption was associated with a 30% decreased risk of developing dementia in the oldest-old. Decreasing prevalence of coffee drinking with dementia severity could be the result of changing dietary habits along the disease course.

O4-08-05   20-YEAR ALCOHOL CONSUMPTION PATTERNS AND COGNITIVE IMPAIRMENT IN OLDER WOMEN

Tina Hoang[1], Deborah Barnes[2], Amy Byers[1], Kristine Yaffe[1], [1]NCIRE, San Francisco, California, United States; [2]University of California, San Francisco, San Francisco, California, United States.

Background: The association between moderate alcohol consumption and cognitive impairment in late-life is controversial with several studies suggesting a protective effect. Few studies have considered patterns of alcohol consumption over time, especially in very late-life. **Methods:** We studied 1306 women ≥ 65 years old, enrolled in a prospective cohort study and followed for 20 years. Frequency of current and past alcohol use was assessed by self report at baseline and current use reassessed at midpoint (years 6 and 8) and late phases (years 10 and 16) of follow-up. Clinically significant cognitive impairment (mild cognitive impairment and dementia) was adjudicated by an expert panel at year 20. **Results:** At baseline, mean age of participants was 68.3(SD=2.8); 40.6% were non-drinkers, 50.4% were light drinkers (0 to 7 drinks/week), and 9.0% were moderate drinkers (≥7 and ‰ 14 drinks/week). Heavy drinkers, >14 drinks/week were excluded, n = 10 (0.8%). Women who reported drinking more in the past than at baseline were at increased risk of developing cognitive impairment (adjusted OR [aOR]=1.30, 95% CI 1.02-1.65). Moderate drinkers at baseline or at midpoint had similar risk of cognitive impairment compared to non-drinkers; however, moderate drinkers in the late phase were more likely to develop cognitive impairment (aOR=1.62, 95% CI 1.14-2.32). Women who changed from nondrinking to drinking over the follow-up period also had an increased risk of cognitive impairment (aOR=3.07, 95% CI 1.39-6.76), while transitioning from drinking to non-drinking over time was not associated with cognitive impairment. **Conclusions:** In this older female cohort, moderate alcohol consumption was not protective. We found that heavier use earlier in life, moderate use in late-life, and transitioning to drinking in late-life were associated with an in-

creased risk of developing cognitive impairment. These findings suggest that alcohol use in late-life may not be beneficial for cognitive function in older women.

O4-08-06   HEAVY EPISODIC DRINKING AND RISK OF COGNITIVE DECLINE IN OLDER ADULTS

Iain Lang[1], Kenneth Langa[2], Robert Wallace[3], David Llewellyn[1], [1]Peninsula College of Medicine and Dentistry, Exeter, United Kingdom; [2]University of Michigan, Ann Arbor, Michigan, United States; [3]University of Iowa, Iowa City, Iowa, United States.

Background: Although the consequences for cognitive function of overall levels of alcohol consumption have been studied little is known about the possible harmful effects of heavy episodic ("binge") drinking in older people. The purpose of this study was to assess the effects of heavy episodic drinking in older people in the United States on cognitive decline and depressive symptoms. **Methods:** Secondary analysis of data from 5,075 participants aged ≥65 years in the Health and Retirement Study (HRS), a biennial, longitudinal, nationally representative survey of US adults aged over 50. Baseline data were collected in 2002 and participants were followed up for eight years. Overall level of alcohol consumption and level of heavy episodic drinking (consumption of four or more drinks on one occasion) were assessed at baseline and models were adjusted for age, sex, mean number of drinks/day, baseline cognitive function score, race, level of education, household wealth, and smoking status. Outcomes were change in cognitive function and memory (assessed using the Telephone Interview of Cognitive Status). **Results:** Binge drinking on average once a month or more frequently was reported by 8.3% of men and 1.5% of women, and binge drinking on average twice a month or more was reported by 4.3% of men and 0.5% of women. In participants who reported heavy episodic drinking once per month or more the odds ratios (OR) of being in the group experiencing the greatest 10% of decline in cognitive function were 1.62 (95% Confidence Interval (CI) 0.99 to 2.65) and of decline in memory were 1.27 (95% CI 0.71 to 2.28). In those reporting heavy episodic drinking twice per month or more the OR of being in the group experiencing the greatest 10% of decline in cognitive function were 2.47 (95% CI 1.31 to 4.60) and of decline in memory were 2.49 (95% CI 1.19 to 5.21). Outcomes were similar in men and women when analyzed separately. **Conclusions:** In community-dwelling older adults, heavy episodic drinking is associated with an increased risk of cognitive decline.

**ORAL SESSIONS: O4-09
NEUROIMAGING: IMAGING—DIAGNOSTIC VALUE AND
CORRELATES OF METABOLIC AND AMYLOID IMAGING**

O4-09-01   INCREASES IN PITTSBURGH COMPOUND B RETENTION ARE ASSOCIATED WITH INCREASED CEREBRAL GLUCOSE METABOLISM IN COGNITIVELY NORMAL ELDERLY: ROLE FOR COMPENSATORY HYPERMETABOLISM?

Ann Cohen, Beth Snitz, Howard Aizenstein, Robert Nebes, Judith Saxton, Lisa Weissfeld, Oscar Lopez, Julie Price, Chester Mathis, William Klunk, University of Pittsburgh, Pittsburgh, Pennsylvania, United States.

Background: Inverse correlations between $A\beta$ measured by PiB-PET and cerebral metabolism using FDG-PET in Alzheimer's disease (AD) suggests local $A\beta$-induced metabolic insults at this stage of cognitive impairment. We previously explored PiB and FDG relationships in MCI (Cohen et al., 2009). In the current study, we explored FDG metabolism in cognitively normal elderly subjects (NC) with and without increased PiB-retention over a 24-months. **Methods:** PiB PET and FDG PET was performed in 50 NC (80±6 years; MMSE: 28±2; 70% female) at baseline and 24-months. Tissue ratios were calculated for cortical regions-of-interest for both tracers, using cerebellum as reference (SUVR).