

# in brief

## for healthcare professionals

Issue 4

alz.org®

### Research Highlights: Subjective Cognitive Concerns May Be an Early Clinical Indicator of Alzheimer's Disease

When older adults complain of memory problems, clinicians may discount it as normal aging. But research reported at the Alzheimer's Association International Conference® 2013 indicates that seniors' concerns about memory problems may be an early sign for eventual cognitive decline. The following summaries of these findings suggest that clinicians might want to monitor more closely patients with subjective cognitive complaints and follow up on any persistent concerns, even for patients who score "normal" on brief cognitive assessment tools.



**Self-reported cognitive concern is a new area of research, so nomenclature used to describe such reports can vary (eg, subjective cognitive concerns, subjective memory complaints). Researchers have just begun to discuss standardization.**



#### *Subjective cognitive concerns and Alzheimer's-associated brain changes*

A study by Amariglio and colleagues<sup>1</sup> at Brigham and Women's Hospital and Massachusetts General Hospital, Boston, showed that subjective concerns about decline in memory and cognitive ability were associated with early pathological changes in Alzheimer's disease biomarkers. A review of amyloid PET brain scans of 131 people over the age of 65 who were otherwise clinically normal with no history of serious neurological and psychiatric illness found a significant relationship between self-reported cognitive concerns and evidence of buildup of beta-amyloid, a protein associated with Alzheimer's disease. A positive amyloid brain scan was more likely to be found in individuals who reported:

- Worse memory relative to their peers, or
- Declines on tasks that required higher-level cognitive processing, such as prioritizing and organizing tasks.

**Subject cognitive complaints should lead clinicians to question and monitor patients more closely to determine whether their self-reported cognitive problems indicate an underlying disease process.**

## *Self-reported memory changes linked with almost triple the risk of MCI or dementia*

Kryscio and colleagues<sup>2</sup> at the University of Kentucky studied the records of 531 individuals (average age of 73) enrolled in Biologically Resilient Adults in Neurological Studies (BRAINS) who underwent annual cognitive assessments for an average of 10 years. They found that elders who self-reported a change in memory since their last annual cognitive assessment were more likely to be diagnosed with mild cognitive impairment (MCI) or dementia during follow-up than those who did not report such a change. More than half (55.7%) of the participants noted a change in memory during the course of the study. Other findings included:

- Participants who self-reported changes were 2.8 times as likely to be diagnosed with MCI or dementia in follow-up visits as those who had not.
- Initial memory complaints occurred an average of six years before MCI diagnosis and nine years before a dementia diagnosis.
- Upon autopsy, those with an MCI or dementia diagnosis had high levels of neuritic plaques and neurofibrillary tangles, the hallmarks of Alzheimer's disease. Those with subjective memory complaints, but no MCI or dementia diagnosis, had moderate levels of plaques and tangles; and those with no history of subjective memory complaints had low levels of plaques and tangles.

## *Subjective memory impairment associated with decline of episodic memory*

A third study by Koppara and colleagues<sup>3</sup> at the University of Bonn, Germany, showed that subjective memory impairment (SMI) in older adults is associated with a decline in a specific type of memory, episodic memory (a recollection of specific events in the past), but not with a decline in working memory or overall cognitive status. The primary care-based, prospective, longitudinal study followed 2,230 cognitively normal older adults with an average age of 80, who were asked, "Do you feel like your memory is becoming worse?" More than 60% (1,365) answered yes, with 372 of those expressing concern about their worsening memory.

- Both SMI-with-no-concern (SMI-C) and SMI-plus-concern (SMI+C) participants performed worse on a word-recall test than healthy controls (HC) at baseline.
- After eight years, the SMI-C group showed significant decline in episodic memory compared with the HC group; the SMI+C group showed even greater decline than the SMI-C group.
- The differences remained after the researchers adjusted for age, gender, ApoE4 status, and education.

## *Summary*

The emerging field of self-reported memory or cognitive changes — reported here as subjective cognitive concerns, subjective memory complaints, or subjective memory impairment — is of great interest in the Alzheimer's research community as scientists try to identify people who are years away from showing traditional clinical symptoms and who may be well-suited for prevention studies. However, much more research is needed before we can say such subjective complaints are a clinical complement to other early detection methods that employ genetics and biomarkers. In clinical practice, these early studies support the emerging concept that patients' subject cognitive complaints may not be a normal sign of aging, but are symptoms that should be evaluated and monitored over time.

## *References*

1. Alzheimer's Association International Conference (AAIC) 2013. Abstract F5-01-04. Presented July 18, 2013.
2. Alzheimer's Association International Conference (AAIC) 2013. Abstract P4-178. Presented July 17, 2013.
3. Alzheimer's Association International Conference (AAIC) 2013. Abstract P4-206. Presented July 17, 2013.