geriatric ward and during a 6-months follow-up period. Patients and Methods: A prospective study of consecutive end-stage dementia (ESD) patients admitted to a general geriatric department of a tertiary hospital. Patients were evaluated weekly by the MSSE that was developed by us and presented at world and regional congresses in Berlin (1999), Jerusalem (2000), Vancouver (2001), Stockholm (2002), Tokyo (2003), Las Vegas (2004), Rio de Janeiro (2005), the Committee for Labor, Social Services and Health of the Israeli Knesset (Parliament) (2005). Results: Two hundred patients were studied. After 6 months' follow-up of ESD patients who admitted to a geriatric department, 88 (44%) had survived and 112 (56%) had died. The MSSE scale score of the surviving ESD patients was low. The total score on the day of admission was  $MSSE=3.41\pm2.02$ , and decreased to MSSE= $2.77 \pm 1.90$ , (P=0.003) during 6 months follow-up. Conversely, the MSSE scale score of the ESD patients who died was high - the total score was MSSE = $4.97\pm2.46$  on the day of admission to a geriatric department, and increased to MSSE=5.93±2.39 on the last day of life with a significant difference ( $P \le 0.0001$ ). Conclusion: Suffering syndrome in terminal dementia is the new proposal pathological symptomatology and entity that is characterized by a high MSSE scale score, <6 months survival, irreversible and intractable aggravation of suffering and medical condition until demise. Suffering syndrome may be the key criterion for enrolling ESD patients for palliative and hospice treatment, and for the development of new alternative setting approaches, such as "Suffering Relief Units" for end-stage and dying dementia patients.

## P2-089 PROGRESSION IN MILD COGNITIVE IMPAIRMENT (MCI) AND PREMCI

Martha Storandt<sup>1</sup>, Elizabeth A. Grant<sup>2</sup>, J. Philip Miller<sup>2</sup>, John C. Morris<sup>2</sup>, <sup>1</sup>Washington University in St. Louis, St. Louis, MO, USA; <sup>2</sup>Washington University in St. Louis, St. Louis, MO, USA. Contact e-mail: mstorand@wustl.edu

Background: The Clinical Dementia Rating (CDR) involves informantbased interviews to ascertain decline in cognitive and functional abilities that is corroborated by a clinical examination of the individual. It is derived without knowledge of cognitive test results from an independently administered psychometric battery. Objective(s): Rates of longitudinal progression were compared for three groups who initially were determined clinically to be very mildly cognitively impaired (CDR = 0.5). Methods: The first group included 32 individuals with amnestic mild cognitive impairment (MCI; Petersen et al., 2001). The second group contained 91 people with MCI according to revised criteria that allow nonamnestic deficits (Winblad et al., 2004). The third group, labeled preMCI, included 274 individuals who were insufficiently impaired for either the amnestic or revised MCI criteria. Conclusions: Rates of decline for the two MCI groups were similar: almost 0.50 standard deviation (SD) per year on a psychometric composite that assessed episodic, semantic, and working memory as well as visuospatial and executive functions. Decline was less (0.21 SD) in the preMCI group. Survival time to a CDR of 1 (mild dementia) was comparable for the original (95% CI 3.79 to 4.07 years) and revised (95% CI 3.06 to 5.10) criteria MCI groups but approximately twice as long in the preMCI group (95% CI 6.73 to 9.11). All cases from the amnestic MCI criteria group with neuropathologic diagnoses met criteria for Alzheimer's disease (AD) as did more than 90% in each of the other two groups. These results indicate MCI is usually early stage AD, and it is possible to identify AD at an even earlier stage than MCI by focusing on intraindividual change rather than comparison with group norms. Further, AD can begin with a cognitive deficit other than memory. Only half of those in the revised MCI group had a memory deficit. Further, 62% of the revised criteria MCI cases had a deficit in only one cognitive area, not two. Current criteria such as specified in the Diagnostic and Statistical Manual for drawing the line between demented and not demented should be revised to reflect these advances in knowledge.

P2-090

## VALIDATION OF A CONSENSUS PANEL APPROACH TO DEMENTIA DIAGNOSIS

Judith L. Heidebrink<sup>1</sup>, Matthew J. Gabel<sup>2</sup>, Roger Higdon<sup>3</sup>, Norman L. Foster<sup>4</sup>, for the Pilot Collaborative PET Imaging Trial. <sup>1</sup>University of Michigan, Ann Arbor, MI, USA; <sup>2</sup>University of Kentucky, Lexington, KY, USA; <sup>3</sup>The BIATECH Institute, Bothell, WA, USA; <sup>4</sup>University of Utah, Salt Lake City, UT, USA. Contact e-mail: jheide@umich.edu

Background: Determining the cause of dementia on clinical grounds alone can be difficult, even for experienced clinicians. As a result, many dementia research centers have adopted a consensus approach to diagnosis, rather than relying on the judgment of a single clinician. While this has face validity, panels are at a disadvantage because they cannot examine patients directly and group dynamics may adversely affect decisions. Consensus procedures also vary widely across centers. Objective: To determine whether a systematic approach to consensus increases the accuracy of dementia diagnosis. Methods: We convened a panel of 6 dementia experts (4 neurologists and 2 psychiatrists) and a (non-expert) panel of 6 residents/ fellows from neurology, psychiatry, and geriatric medicine. Each panel reviewed brief clinical summaries of medical records from 45 patients with pathologically-confirmed frontotemporal dementia (FTD, 17 cases) or Alzheimer's disease (AD, 31 cases). Panels used a modified Delphi method to incrementally arrive at a diagnosis. First, panelists independently and anonymously made an initial diagnosis of either FTD or AD and indicated their degree of confidence. They then were informed of the vote tally and encouraged to discuss the diagnostic features of the case. Following discussion, a second independent and anonymous vote was held. Finally, the panel was asked to reach a unanimous consensus diagnosis. All votes were compared to the neuropathological diagnosis. Results: The consensus process increased diagnostic accuracy for both experts (79% before discussion, 81% after discussion, 84% at consensus) and non-experts (71% before discussion, 79% after discussion, 84% at consensus). It also increased diagnostic certainty. Case discussion took on average 4.5 minutes (range 0.5-15 minutes) and changed at least one of each panelist's diagnoses. Conclusions: This practical, yet rigorous, consensus method takes advantage of the diverse backgrounds of panelists while avoiding recognized pitfalls of undue influence by single individuals and group persuasion. It improves the accuracy of making a specific dementia diagnosis, particularly when using final, unanimous panel agreement. This approach provides an acceptably accurate "best possible" diagnosis for research studies when pathological data are not available.

Supported by NIH grants RO1-AG22394, P50-AG08671 and the Louise Madsen Research Fund.

## P2-091 INSTRUMENTAL ACTIVITIES OF DAILY LIVING (IADL) SCALE IN THE DIAGNOSIS OF DEMENTIA

**Paula Hancock**<sup>1,2</sup>, Andrew J. Larner<sup>3</sup>, <sup>1</sup>National Health Service, Liverpool, United Kingdom; <sup>2</sup>5 Boroughs Partnership NHS Trust, Halton, United Kingdom; <sup>3</sup>Walton Centre for Neurology and Neurosurgery, Liverpool, United Kingdom. Contact e-mail: paulahancock@btinternet.com

**Background:** There is a need in clinical practice for a test that is easy to administer and would distinguish dementia from other conditions. **Objective(s):** To measure the utility of the Instrumental Activities of Daily Living (IADL) Scale in the diagnosis of dementia. **Methods:** Prospective study of all new Cognitive Function Clinic referrals seen over a one-year period (Feb 2004 - Feb 2005) who have been administered the Instrumental Activities of Daily Living (IADL) Scale or Physical Self-Maintenance Scale (of Lawton & Brody, 1969), with minimum 9 months follow-up, to assess diagnostic utility. Of 97 patients seen (M:F = 52:45, age range 23-82 years, median 61 years), 53 were diagnosed with dementia by DSM-IV criteria (55%). IADL Scale scores ranged from 1-14 (median 11,