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CME PSYCHCAST™

Alzheimer's Disease Summit
Translating Research Advances Into Clinical Practice

Advances in Clinical Assessment (61 Minutes)

Short Clinical Assessments Applicable to Busy Practices
Ziad Nasreddine, MD

Neuropsychological Characterization of Dementia Patients
Kathleen Welsh-Bohmer, PhD

Computerized Neuropsychological Assessments
Ellen Woo, PhD

Other PsychCasts™ in this series include:

Advances in Neuroimaging and Biomarkers
L.G. Apostolova, M.A. Mintun, and E.R. Peskind

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Supplement related to this activity at
cnsspectrums.com.**

**To learn more about the Alzheimer's Disease
Summit, please visit alzsummit.com.**

CME 1



This activity is jointly sponsored by the Mount Sinai School of Medicine and MBL Communications, Inc.



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CME Course Director

This activity has been peer reviewed and approved by James C.-Y. Chou, MD, associate clinical professor of Psychiatry at the Mount Sinai School of Medicine. Review Date: September 24, 2008.

Faculty Affiliations

Ziad Nasreddine, MD, is assistant professor at the University of Sherbrooke, and McGill University, and has developed the Montreal Cognitive Assessment (MoCA).

Kathleen Welsh-Bohmer, PhD, is director of the Joseph and Kathleen Bryan Alzheimer's Disease Research Center at Duke University and the Principal Investigator for the Cache County Utah Memory Study. She is professor of psychiatry in the Division of Medical Psychology at Duke University Medical Center as well as a senior fellow in the Duke Center for Human Development.

Ellen Woo, PhD, is visiting assistant professor at the Mary S. Easton Center for Alzheimer's Disease Research at the University of California, Los Angeles.

Faculty Disclosure Policy Statement

It is the policy of the Mount Sinai School of Medicine to ensure objectivity, balance, independence, transparency, and scientific rigor in all CME-sponsored educational activities. All faculty participating in the planning or implementation of a sponsored activity are expected to disclose to the audience any relevant financial relationships and to assist in resolving any conflict of interest that may arise from the relationship. Presenters must also make a meaningful disclosure to the audience of their discussions of unlabeled or unapproved drugs or devices. This information will be available as part of the course material.

Faculty Disclosures

Dr. Nasreddine is a consultant to Pfizer Canada; has received consulting fees from Janssen/Ortho and Novartis; and receives research support from AstraZeneca, Elan, GlaxoSmithKline, Lundbeck Canada, Myriad, Neurochem, and Novartis.

Dr. Welsh-Bohmer receives support from the National Institute of Aging AG05128 (Bryan ADRC) and AG11380 (Cache County Project), and from GlaxoSmithKline (Bryan ADRC). She has been a paid consultant on clinical trials by GlaxoSmithKline.

Dr. Woo reports no financial, academic, or other interest in any organization that may pose a conflict of interest.

Peer Reviewer

James C.-Y. Chou, MD, reports no affiliation with or relevant financial interest in any organization that may pose a conflict of interest.

Learning Objectives

- Adapt the most frequently used and promising cognitive clinical assessments for Alzheimer's disease
- Recognize the distinguishing neuropsychological characteristics of early stage Alzheimer's disease and mild cognitive

impairment as it contrasts with normal cognitive aging

- Evaluate the utility of computerized assessment in the diagnosis of mild cognitive impairment and Alzheimer's disease

Statement of Need and Purpose

Alzheimer's disease (AD) is a progressive brain disorder that affects cognitive, behavioral, and functional abilities. Patients progress from mild cognitive impairment to death in a span of approximately 10 years, with increasing functional disability, cognitive impairment, and behavioral symptoms. AD currently affects 4.5 million Americans, and its prevalence is rapidly rising. In addition, many patients are not diagnosed until late in their disease progression, and available treatments are underutilized. Research advances must be translated into clinical practice to maximally impact the care of patients.

New technologies are evolving to assist clinicians in dementia recognition, including screening exams, computerized neuropsychological test batteries, and neuropsychological testing. Neuroimaging and biomarkers play a growing role in research and clinical practice. Knowing when to apply these new techniques in clinical practice and how to interpret their results is increasingly important to clinicians and patients. AD therapeutics is poised to change dramatically in the next few years. There have been new indications for the use of cholinesterase inhibitors. Improved understanding of the pathophysiology of AD has presented well-informed targets for therapeutic intervention, and disease-modifying agents are currently being tested in clinical trials. Anti-amyloid strategies, neuroprotective strategies, immunotherapies, enzyme inhibitors, and neuroprotective approaches are some of the directions being explored. Practitioners need information about the changing landscape of AD research to respond to patient questions, anticipate new therapeutic directions, and refer to clinical trials.

The Alzheimer's Disease Summit (ADS), held on May 3, 2008, in Washington, DC, translated cutting-edge research into day-to-day practice. Leading experts discussed the latest research advances in four critical areas—diagnosis, imaging and biomarkers, current treatment, and evolving treatment approaches—and related this new knowledge to clinical practice. This PsychCast, based on information presented at the ADS, presents valuable clinical content to a broad audience of primary care physicians, psychiatrists, geriatricians, and neurologists.

Target Audience

This activity is designed to meet the educational needs of neurologists, primary care physicians, and psychiatrists.

Accreditation Statement

This activity has been planned and implemented in accordance with the Essentials and Standards of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the Mount Sinai School of Medicine and MBL Communications, Inc. The Mount Sinai School of Medicine is accredited by the ACCME to provide continuing medical education for physicians.



Credit Designation

The Mount Sinai School of Medicine designates this educational activity for a maximum of 1 *AMA PRA Category 1 Credit™*. Physicians should only claim credit commensurate with the extent of their participation in the activity.

To Receive Credit for this Activity

Listen to the PsychCast™, reflect on the information presented, and complete the CME posttest and evaluation. To obtain credit, you should score 70% or better. Early submission of this posttest is encouraged. Please submit this posttest by December 1, 2010 to be eligible for credit.



SHORT CLINICAL ASSESSMENTS APPLICABLE TO BUSY PRACTICES

By Ziad Nasreddine, MD

SLIDE LIBRARY

SLIDE 1

What are the Most Commonly Used Brief Cognitive Tests? ¹

- Mini Mental State Examination
- Clock Drawing Test
- Delayed Word Recall
- Verbal Fluency Test
- Similarities
- Trail Making Test

Effectiveness and ease of administration were most highly predictive of frequency of use

SLIDE 2

Dementia Screening Tests ²⁻¹⁸

Test	Sensitivity (%)	Specificity (%)	Time (Mins)
DemTect ³	83–100	70–92	8
Montreal Cognitive Assessment ⁴	100	87	10
7-minute Screen ⁵	90–92	92–96	7
Mini-Cog ^{6,7}	75–99	81–93	3
Mini-Mental State Examination ²	71–95	76–100	8
Memory Impairment Screen ⁸	80–86	96–97	5
Short Test of Mental Status ⁹	95	91	10
Abbreviated Mental Test ¹⁰	42–77	79–93	1-3
6 Item Screener ¹¹	89–94	86–88	2
Hopkins Verbal Learning Test ¹²	83–96	80–98	5
6-Item Cognitive Impairment Test ¹³	79–90	100	5
Clock Drawing Test ¹⁴	45–77	81–91	2

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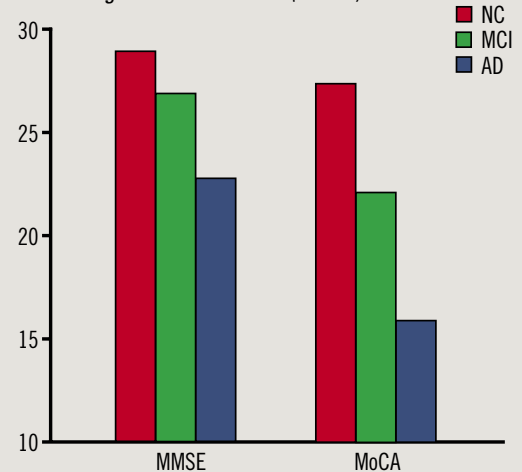
SLIDE 3

MCI Screening Tests ^{3,4,11,15,16,19}

Test	Sensitivity (%)	Specificity (%)	Time (Mins)
Montreal Cognitive Assessment ⁴	90	87	10
DemTect ³	80	92	8
6 Item Screener ¹¹	50	97	2
Short Test of Mental Status ¹⁵	.74 (AUC)	.74 (AUC)	10
Mini-Cog ¹⁹	55	83	3
Mini-Mental State Examination ^{3,4}	18–71	85–100	
Clock Drawing Test ¹⁶	20–75	76–88	2

SLIDE 4

Montreal Cognitive Assessment (MoCA) ⁴



NC=healthy elderly controls; MCI=mild cognitive impairment; AD=Alzheimer's disease; MMSE=Mini Mental State Examination.

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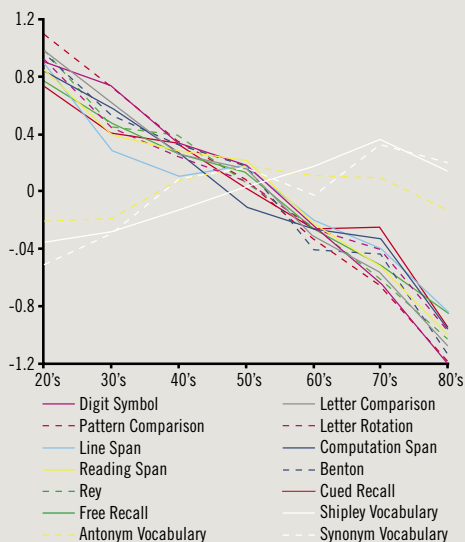
NEUROPSYCHOLOGICAL CHARACTERIZATION OF DEMENTIA PATIENTS

By Kathleen Welsh-Bohmer, PhD

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SLIDE 1

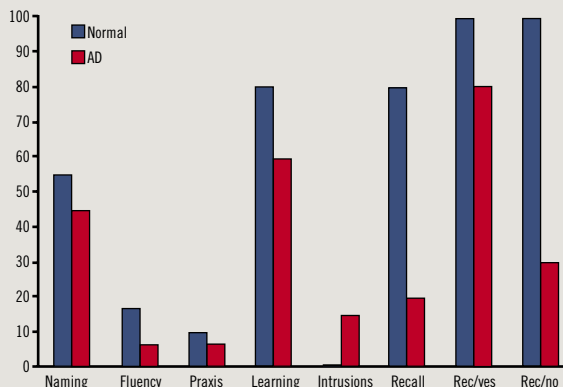
Normal Aging and Cognitive Test Performance¹



There is linear decline by age on measures of attention, concentration, rapid visuospatial analysis, and episodic memory.
Resistant to age are aspects of semantic knowledge (vocabulary) and abstraction.
Reprinted with permission: Park DC, et al. Models of visuospatial and verbal memory across the adult life span. *Psychology and Aging*. American Psychological Association. Copyright 2002.

SLIDE 3

Profiles of Alzheimer's Disease and Normal Aging



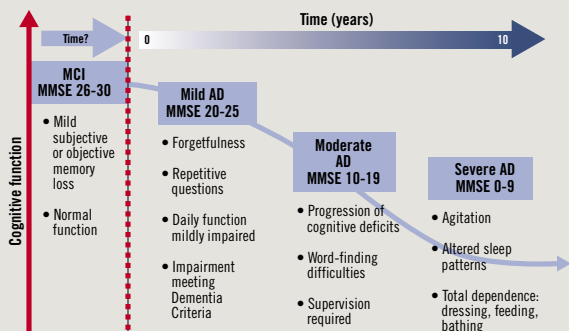
Rec/yes=correct recognition of 10 previously learned words; Rec/no=correct identification of 10 non-target words as new and not on previous learned list.

Reference

1. Park DC, Lautenschlager G, Hedden T, Davidson NS, Smith AD, Smith PK. Models of visuospatial and verbal memory across the adult life span. *Psychol Aging*. 2002;17(2):299-320.

SLIDE 2

Continuum of Alzheimer's Disease Neurocognitive Change



MCI=mild cognitive impairment; MMSE=Mini-Mental State Examination.

ALZHEIMER'S DISEASE SUMMIT: ADVANCES IN CLINICAL ASSESSMENT

CME QUESTIONS

1. **What are the most commonly used brief cognitive tests in addition to the Mini-Mental State Examination (MMSE)?**
 - A. Clock Drawing Test
 - B. Similarities
 - C. Verbal fluency
 - D. Delayed word recall

2. **As part of a comprehensive evaluation, a neuropsychologist can:**
 - A. Assess the role of the patient's mood in their cognitive functioning
 - B. Assess a patient's cognitive strengths and weaknesses
 - C. Provide treatment recommendations that are tailored to the patient's cognitive profile
 - D. All of the above

3. **A 65-year-old patient presents with a notable newly acquired aphasia accompanied by some reactive depression; the patient is frightened, having undergone an extensive evaluation (including neuropsychological testing, routine laboratory studies, and neuromaging) 3 months prior. At prior assessment, neurologist stated his condition was a progressive dementia. The patient is seeking a second opinion and treatment. Upon reviewing the records in detail, it is evident that the examination was thorough, and during examination at presentation, a primary progressive aphasia is diagnosed. A neuropsychological referral would be most helpful in this instance:**
 - A. To review the neuropsychological findings to determine if the last testing was reliable and appropriately interpreted
 - B. To repeat the evaluation to see if there is evidence of progression
 - C. To provide an opinion as to the contribution of depression to the cognitive disorder as it might be confounding the picture
 - D. To provide an opinion regarding patient cognitive and functional capacities along with non-pharmacological therapeutic options

4. **Computer-based assessments:**
 - A. Are equivalent to standard paper-and-pencil neuropsychological tests
 - B. Are useful in conjunction with standard paper-and-pencil neuropsychological tests
 - C. Have no utility for the diagnosis of mild cognitive impairment
 - D. None of the above

5. **A 70-year-old patient complains of memory impairment and reports particular concern given a family history of Alzheimer's disease. The patient has an MMSE score of 28/30, having missed one item on registration of three words and one step of a three-step command. A neuropsychological referral is sought and indicates some mild impairment on tests new learning and delayed recall. However, there is no consistent problem in these domains, no other cognitive deficits, and intact recognition memory. Based on the available information at this point the most likely neuropsychological diagnosis in this situation:**
 - A. Normal aging
 - B. Mild cognitive impairment (MCI) or prodromal Alzheimer's disease
 - C. Mild dementia, likely Alzheimer's disease
 - D. Mild dementia, not Alzheimer's disease

6. **Which test is the most sensitive to detect MCI?**
 - A. Montreal Cognitive Assessment
 - B. DemTect
 - C. Short Test of Mental Status
 - D. Clock Drawing Test

REGISTRATION

DECEMBER 2008 CME POSTTEST



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ANSWER FORM

Expert Review PsychCast™ – Alzheimer's Disease Summit: *Advances in Clinical Assessment*

TERMINATION DATE: December 31, 2010

To receive credit, you should score 70% or better (participants will receive certification for their records in approximately 4–6 weeks). Early submission of this posttest is encouraged. Please submit this test by December 1, 2010, to be eligible for credit. If you have any questions about this, or any of our other CME materials, please e-mail CME@mblcommunications.com

Please circle your answers

1. A B C D

2. A B C D

3. A B C D

4. A B C D

5. A B C D

6. A B C D

EVALUATION SECTION (please provide the information below and print clearly)

- Was this activity relevant to your practice? Yes No
- Did this activity meet the stated learning objectives? Yes No
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- Does the information you received from this CME activity confirm the way you presently manage your patients? Yes No
- Will the information you received from this CME activity change the way you will manage your patients in the future? Yes No

If you answered yes, what change(s) do you intend to make in your practice? _____

- Did this CME activity provide a balanced, scientifically rigorous presentation of therapeutic options related to the topic without commercial bias and influence? Yes No

- Do you feel these topics should be repeated/updated in future CME activities? Yes No

If you answered yes, what suggestions would you make to improve this activity? _____

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