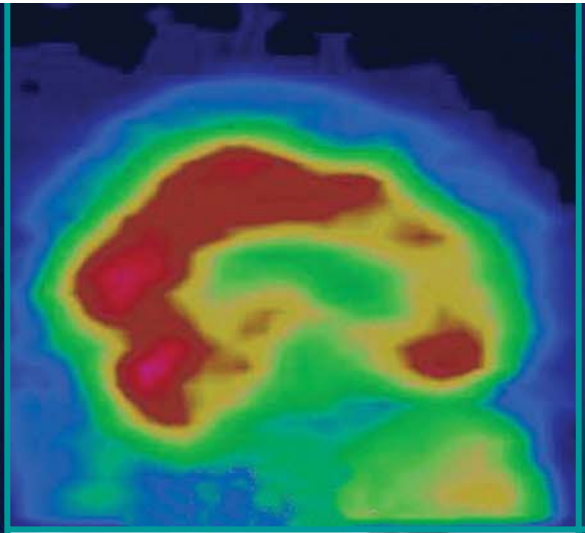

Challenges and Opportunities in Dementia Management:

2006 Update

June 12, 2006

St. Louis, Missouri

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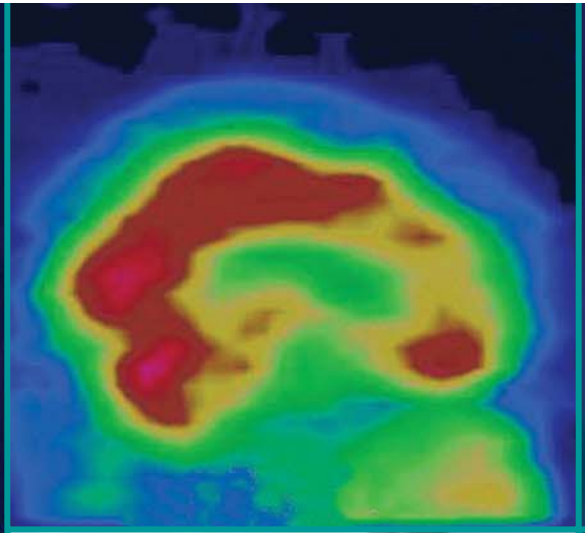
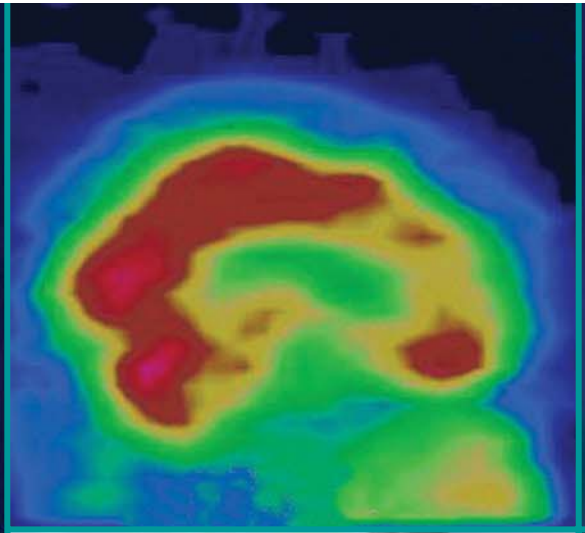


Challenges and Opportunities in Dementia Management:

2006 Update

Cynthia D. Steele, RN, MPH *Program Chairperson*

The Johns Hopkins University Schools of Medicine and Nursing
The Copper Ridge Institute
Baltimore, Maryland



Introduction and Symposium Goals

Cynthia D. Steele, RN, MPH *Program Chairperson*

Learning Objectives

- Identify signs and symptoms of dementia in patients to ensure early diagnosis
- Implement early and effective strategies for improved care in the long-term facility
- Understand improved outcomes in dementia management related to patient quality of life, caregiver burden, and cost
- Translate information presented into practical application in their facility

Housekeeping 1

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- This 1.5 contact hour Educational Activity (Provider Directed) is provided by The Institute for Johns Hopkins Nursing
  - Attendees are asked to claim only those contact hours actually spent in the activity
  - Please complete Certificate found in program brochure and turn in WHITE copy to meeting staff
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Housekeeping 2

- It is policy of The Institute for Johns Hopkins Nursing that faculty and sponsor disclose real or apparent conflicts of interest relating to topics of this educational activity, and also disclose discussions of unlabeled/unapproved uses of drugs or devices during their presentation[s]
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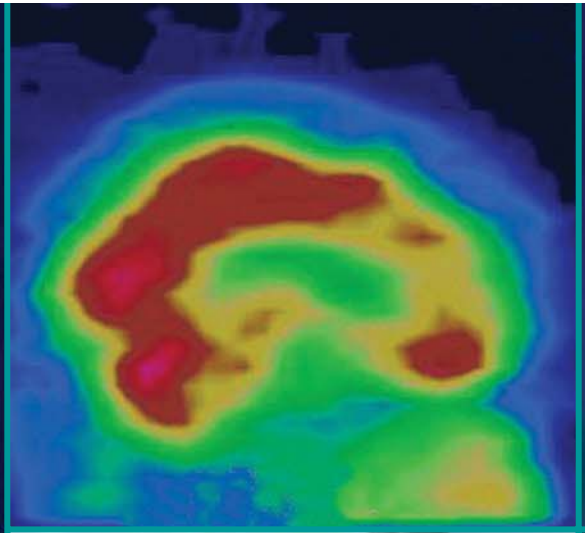
Housekeeping 3

- Please feel free to use aisle microphones and/or question cards during panel discussion, at conclusion of didactic presentations
- Please complete evaluation form included in program brochure and turn it in to meeting staff at conclusion of program



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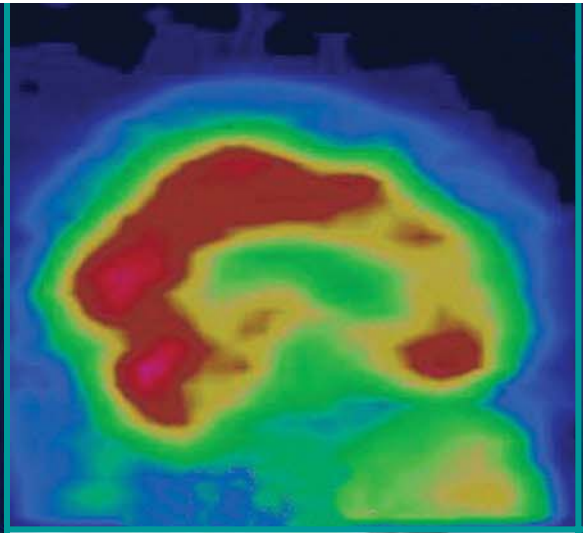


Dementia in the Long-Term Care Facility: Identifying the Signs and Symptoms for Early Diagnosis

Elizabeth M. Galik, RN, MSN, CRNP

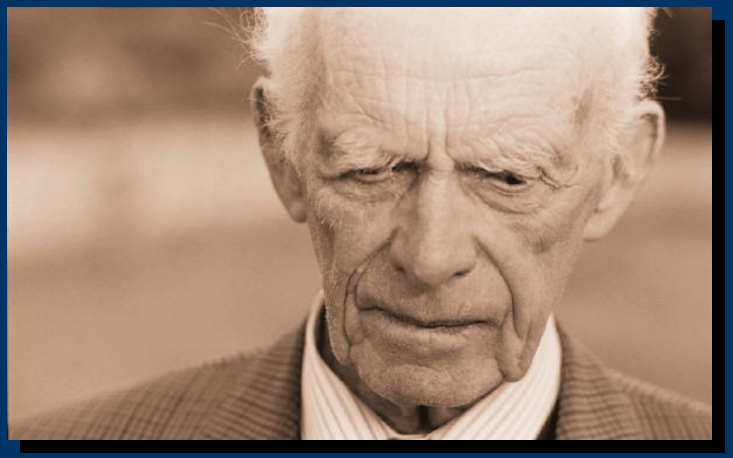
Johns Hopkins University School of Medicine
Baltimore, Maryland

Dementia Defined

- Decline of cognitive capacity (memory language, judgment, etc)
- Multiple areas of cognition impaired (global)
- Occurs in a normal level of consciousness (absence of delirium)

Dementia Statistics

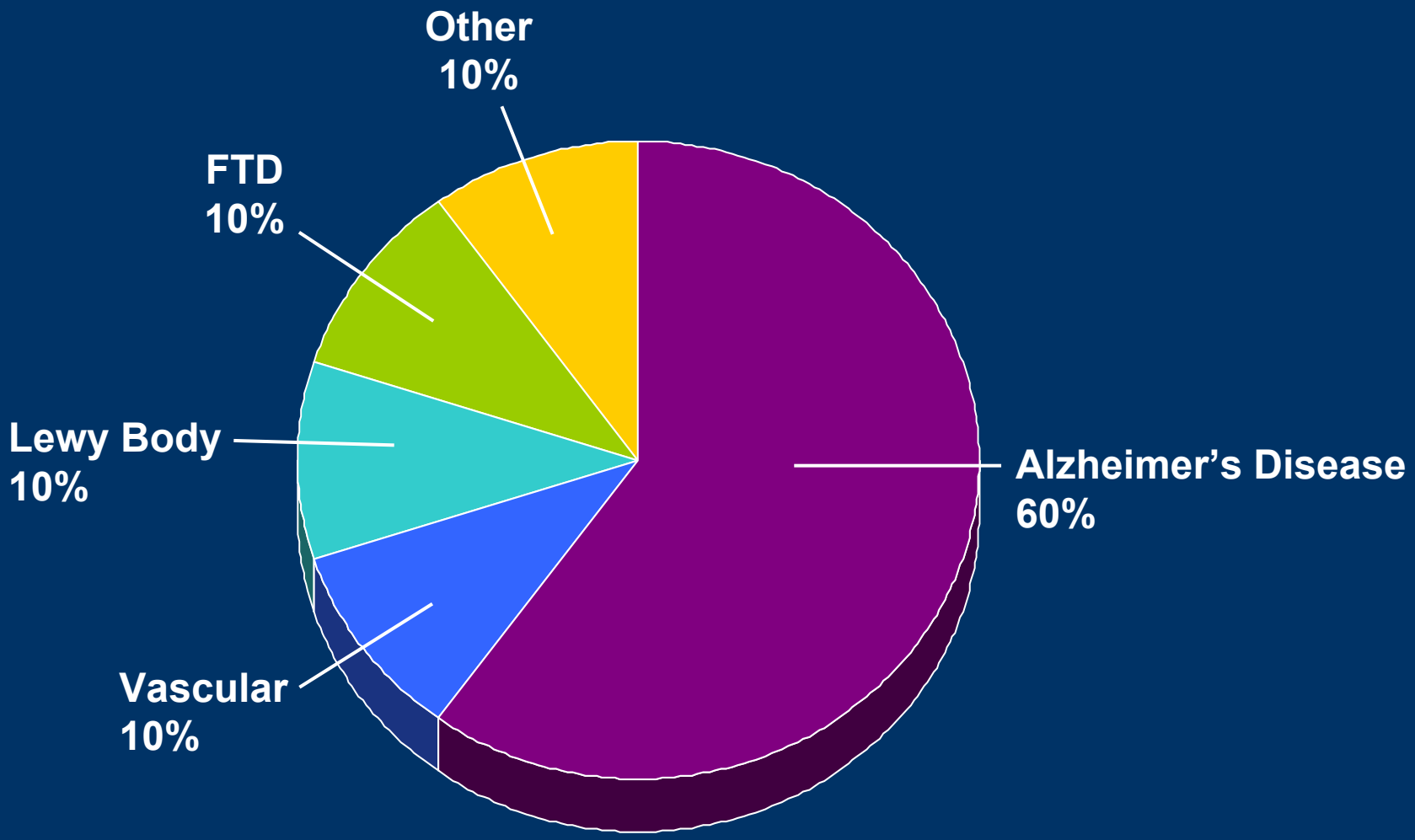
- Very common, affecting at least 4 to 5 million Americans
- By 2050, 12 million Americans will have Alzheimer's disease (the most common cause of dementia)



Dementia in Long-Term Care (LTC)

- 70% to 80% LTC residents have symptoms consistent with dementia
- However, only 50% to 65% of LTC residents are actually diagnosed with dementia

Common Causes of Dementia



FTD=frontotemporal dementia.

Common Symptoms of Alzheimer's Disease

- Amnesia (memory loss)
- Aphasia (language impairment)
- Apraxia (impairment in learned motor skills)
- Agnosia (loss of ability to recognize familiar people, objects, etc)
- Impairment in executive functioning

Recognizing the Common Signs of Alzheimer's Disease

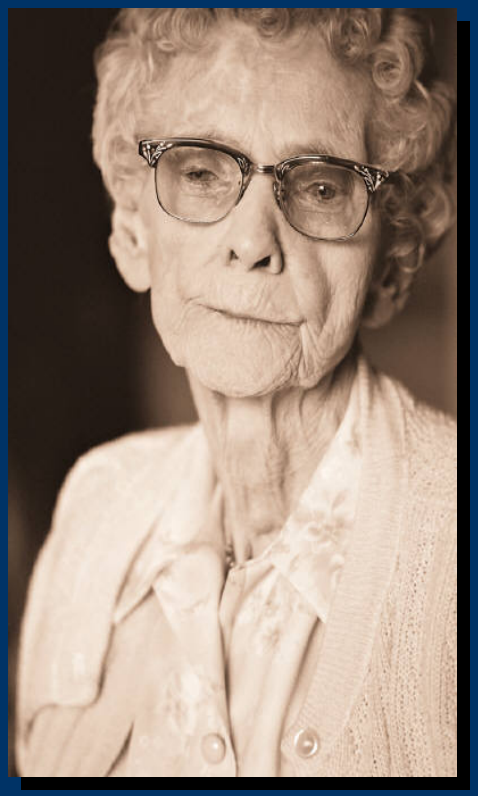
- Memory loss
- Difficulty performing familiar tasks
- Trouble finding words
- Problems naming common objects
- Substituting words
- Disorientation to time and place
- Misplacing or losing things a lot
- Trouble solving everyday problems
- Getting lost easily
- Impaired judgment
- Loss of initiative
- Changes in mood, personality, or behavior

Why Is It Important to Diagnose Dementia in LTC?

- Dementia is *not* a normal part of aging
- Increased costs of caring for residents with dementia (financial and emotional)

Why Is It Important to Diagnose Dementia in LTC?

- Gives caregivers (family/staff) an opportunity to adapt methods of communication and care
- Treatment of cognitive/functional symptoms and mood/behavioral symptoms may ultimately affect a resident's quality of life



Screening for Dementia in LTC

- Assessment tools are helpful for screening, but are not diagnostic
- In order to diagnose dementia, residents should be referred for a comprehensive evaluation with their primary health care provider or a specialist (physician, nurse practitioner, neurologist, geriatric psychiatrist)

Common Methods of Screening for Dementia in Long Term Care

- Mini-Mental Status Examination (MMSE)
- Clock Drawing Test
- Items from the Minimum Data Set (MDS)

Dementia Screening: Mini Mental Status Examination

- Brief, structured
- Scores range from 0-30
- Limited by ceiling and floor effect
- Assesses:
  - orientation
  - registration
  - attention
  - recall
  - language/comprehension
  - praxis

Folstein M et al. *J Psychiatr Res.* 1975;12:189-198.

Dementia Screening: Clock Drawing Test

- May help to detect deficits in cognition, such as attention, executive functioning, and visual spatial deficits
- Brief (1-5 minutes)
- Minimal language requirement

Shulman KI et al. *Int J Geriatr Psychiatry.* 1993;8:487-496.

Screening for Dementia: MDS

- Data that is already required to be collected in the nursing homes
- Relevant sections for dementia screening include:
  - cognitive patterns
  - communication
  - behavioral symptoms
  - physical function

Screening for Dementia: Cognitive Performance Scale (CPS)

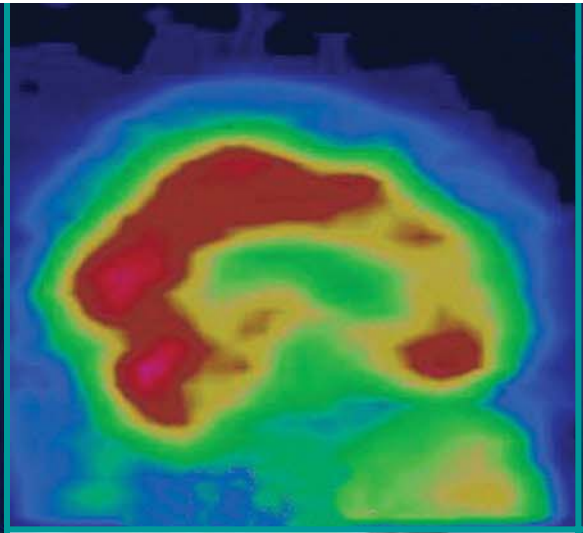
CPS is generated from 5 MDS items:

1. Comatose status
2. Short-term memory (the ability to recall information after 5 minutes)
3. Daily decision making (the ability to make everyday decisions about tasks or ADL)
4. Making self understood (able to communicate)
5. ADL self-performance in eating

Mottis JN et al. *J Gerontol.* 1994;49:M17-M182.

Why Is Recognition and Treatment of Dementia Important?

- Potential opportunity to:
  - Improve resident quality of life
  - Reduce or stabilize cognitive and/or functional decline
  - Reduce or stabilize behavioral deterioration
  - Decrease stress on caregiver/LTC staff



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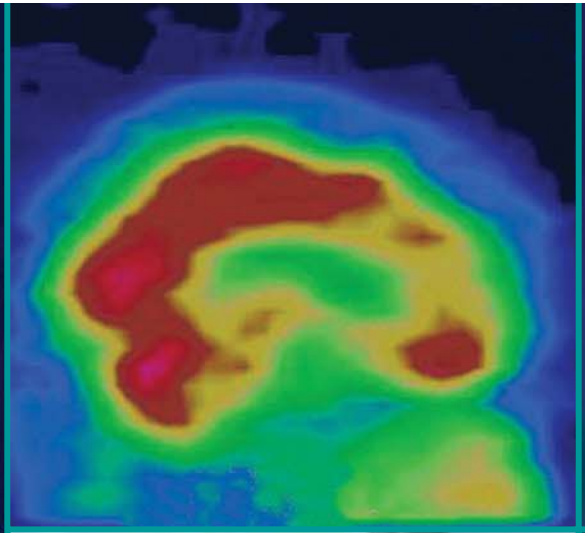


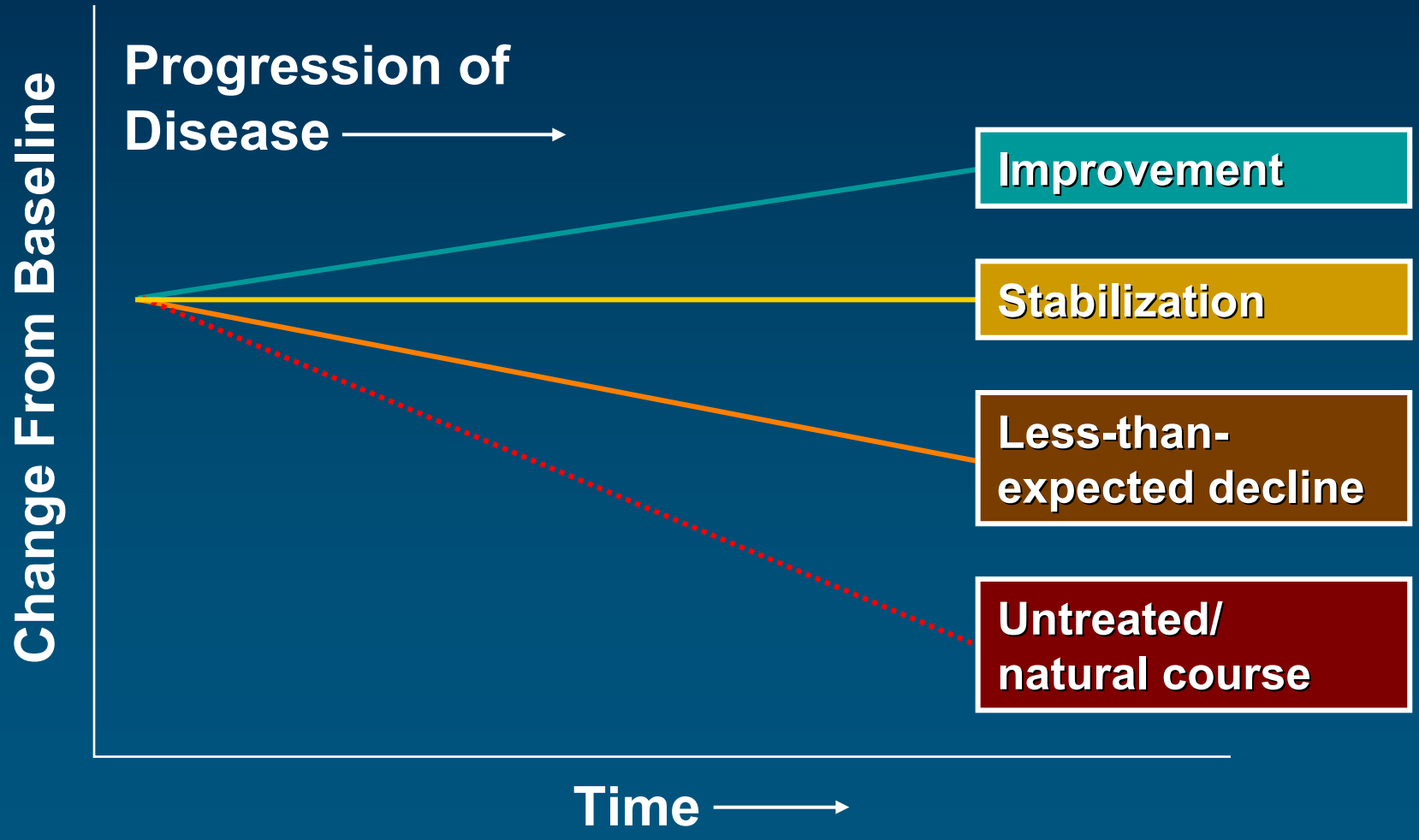
Dementia Treatment: Implementing Early and Effective Strategies for Improved Long-Term Care

Manju T. Beier, PharmD, FASCP

Geriatric Consultant Resources
University of Michigan
Ann Arbor, Michigan

Pharmacologic Treatment Success in AD

Treatment success may currently be defined as:



Benefits of Treating Disease Progression

- Neurophysiologic pathways in patients with AD are still viable and are a target for treatment
- Opportunity to reduce:
  - functional decline
  - cognitive decline
  - behavioral symptoms
  - caregiver burden

FDA-Approved Pharmacotherapy in Alzheimer's Disease

Cholinesterase Inhibitors

- Donepezil
- Galantamine
- Rivastigmine
- Approved for use in *mild to moderate AD*

N-Methyl-D-Aspartate–Receptor Antagonist

- Memantine
- Approved for use in *moderate to severe AD*

FDA=US Food and Drug Administration.

Cholinesterase Inhibitors: Dosing Comparison

Characteristic	Donepezil	Rivastigmine	Galantamine
Doses per day	1	2	1
Initial dose (mg/d)	5	3	8
Dose escalation	4-6 weeks	Biweekly	4 weeks
Clinically effective dose (mg/d)	5	6-12	16-24
Given with food	With/without	Yes	Recommended

Aricept® (donepezil HCl) package insert. Pfizer Inc.
Razadyne® (rivastigmine tartrate) package insert. Ortho-McNeil Neurologics, Inc.
Exelon® (galantamine HBr) package insert. Novartis Pharmaceuticals Corp.

Cholinesterase Inhibitors: Adverse Effect Profile

Gastrointestinal

- Nausea, vomiting, diarrhea, abdominal pain
- May result in anorexia and weight loss

Cardiovascular

- Bradycardia, tremor, and dizziness
- May result in asthenia and fatigue

Neuromuscular

- Muscle cramps and weakness
- May result in falls

Central nervous system

- Insomnia, nightmares, agitation, and a panic-like state

Bentué-Ferrer D et al. *CNS Drugs*. 2003;17:947-963.

Potential Drug Interaction: Anticholinergics and Cholinesterase Inhibitors

- Opposing actions of drugs on the cholinergic system in CNS
- Anticholinergic agents effectively deplete the brain of acetylcholine
- Need to have increased awareness ***especially in the setting of incontinence***

Beier MT. *J Am Med Dir Assoc*. 2005;6(6):413-414.

Memantine: Suggested Dosing

- Titrate memantine to 20 mg/d (10 mg bid):
  - start with 5 mg qd (5→10→15→20 mg) over 4-week titration
- Decrease dose (to 5 mg bid) in patients with severe renal impairment (CLcr: 5 – 29 mL/min)

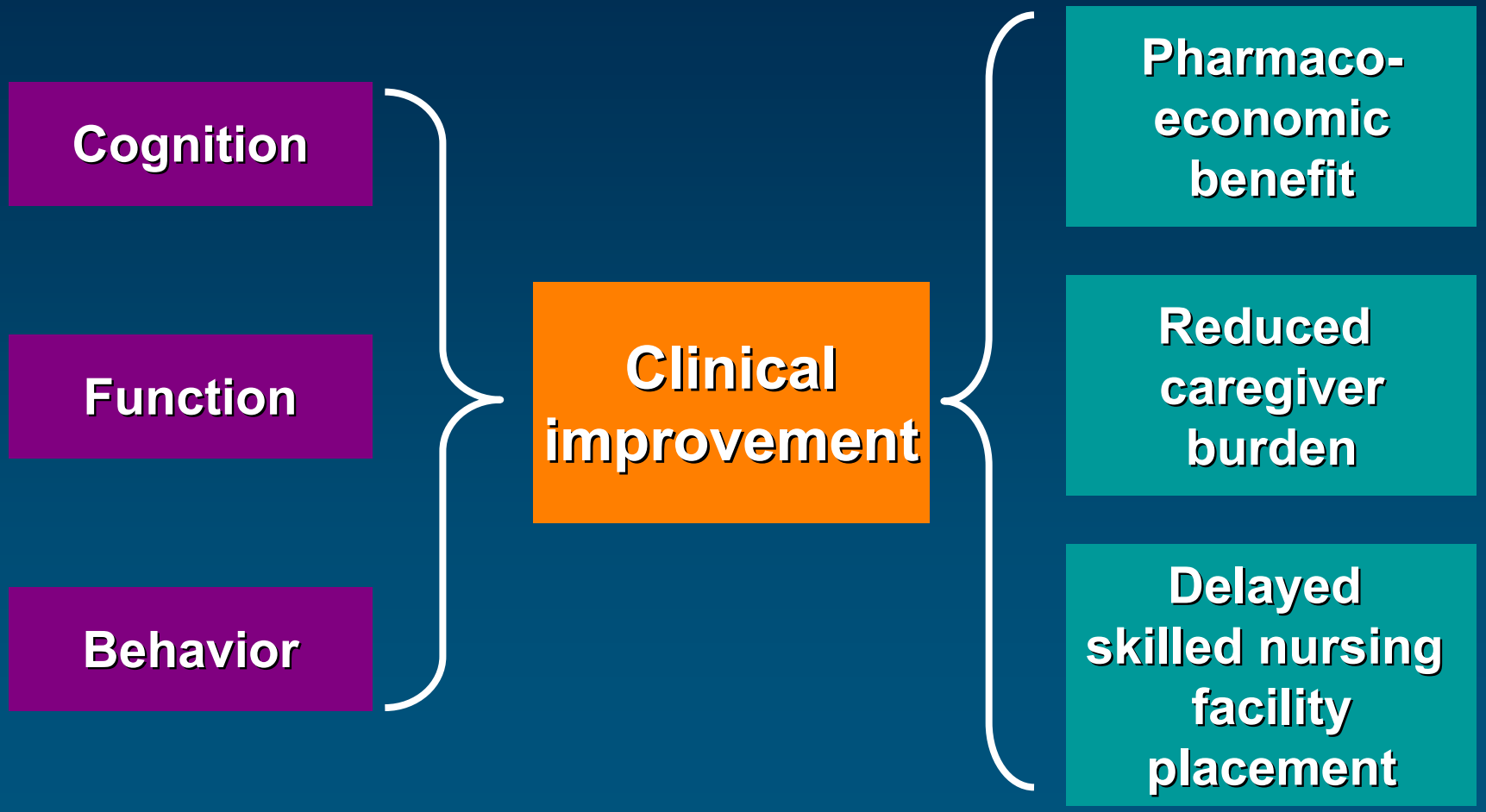
Namenda® (memantine HCl) package insert. Forest Pharmaceuticals, Inc.

Memantine: Adverse Events

- No clinically relevant differences between memantine- and placebo-treated groups were observed in:
  - adverse event profile
    - Most common AEs reported with memantine vs placebo (≥5% than placebo) were dizziness, confusion, headache, and constipation
  - vital signs
  - laboratory parameters
  - ECG values

Namenda® (memantine HCl) package insert. Forest Pharmaceuticals, Inc.

AChE Inhibitors: Domains of Efficacy



Reduced Caregiver Time

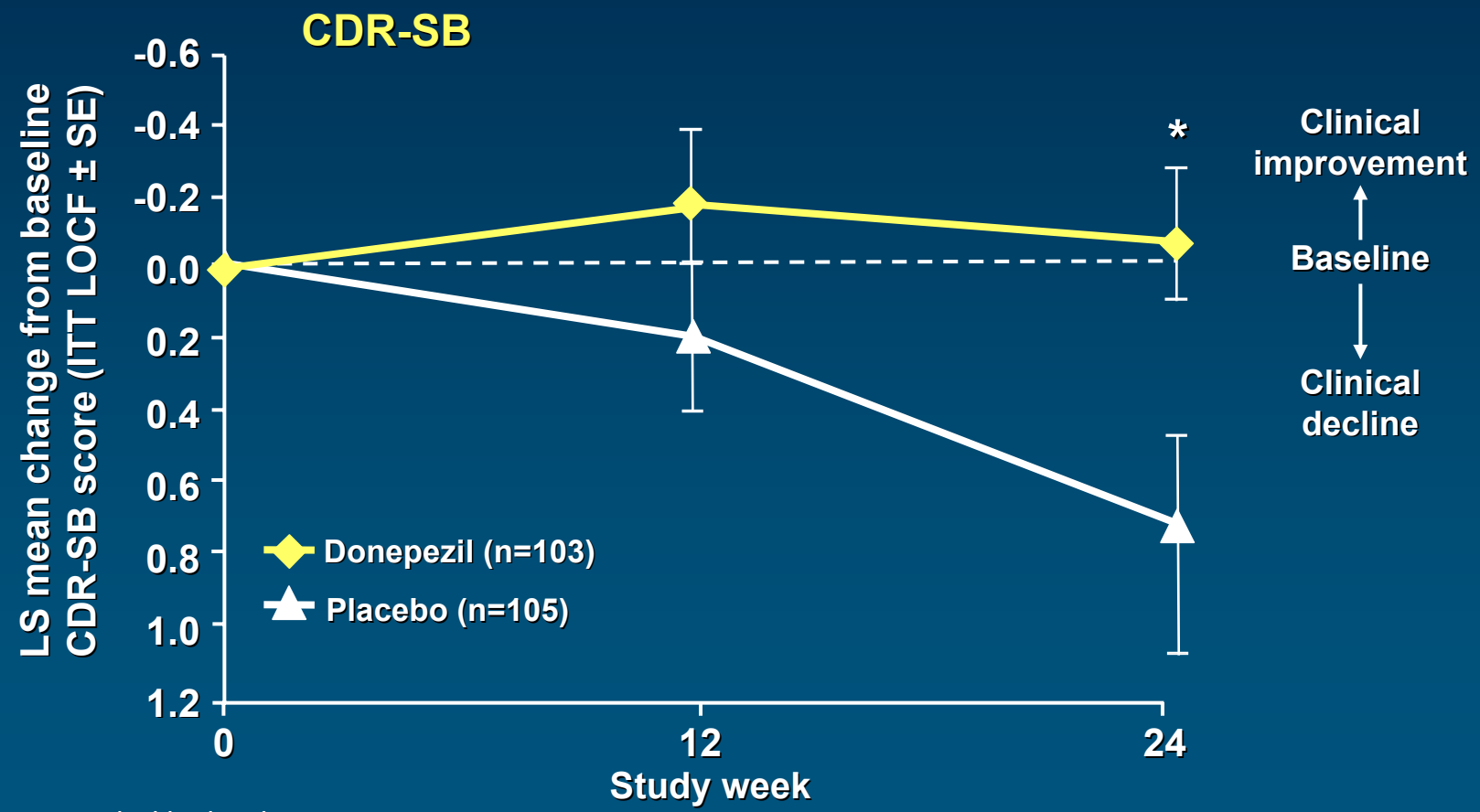
	Donepezil[1]	Galantamine[2]	Memantine[3]
Study Duration	24 weeks	52 weeks	28 weeks
Disease Severity	Moderate-Severe	Mild-Moderate	Moderate-Severe
Reduced Caregiver Time	52.4 min/d	60 min/d	92 min/d

Note: Cholinesterase inhibitors are not indicated for treatment of severe AD.

1. Feldman H et al. *J Am Geriatr Soc*. 2003;51:737-744.
2. Wilcock G, Lilienfeld S. Poster presented at: 7th International World Alzheimer Congress; July 9-18, 2000; Washington, DC.
3. Wimo A et al. *Pharmacoeconomics*. 2003;21:327-340.

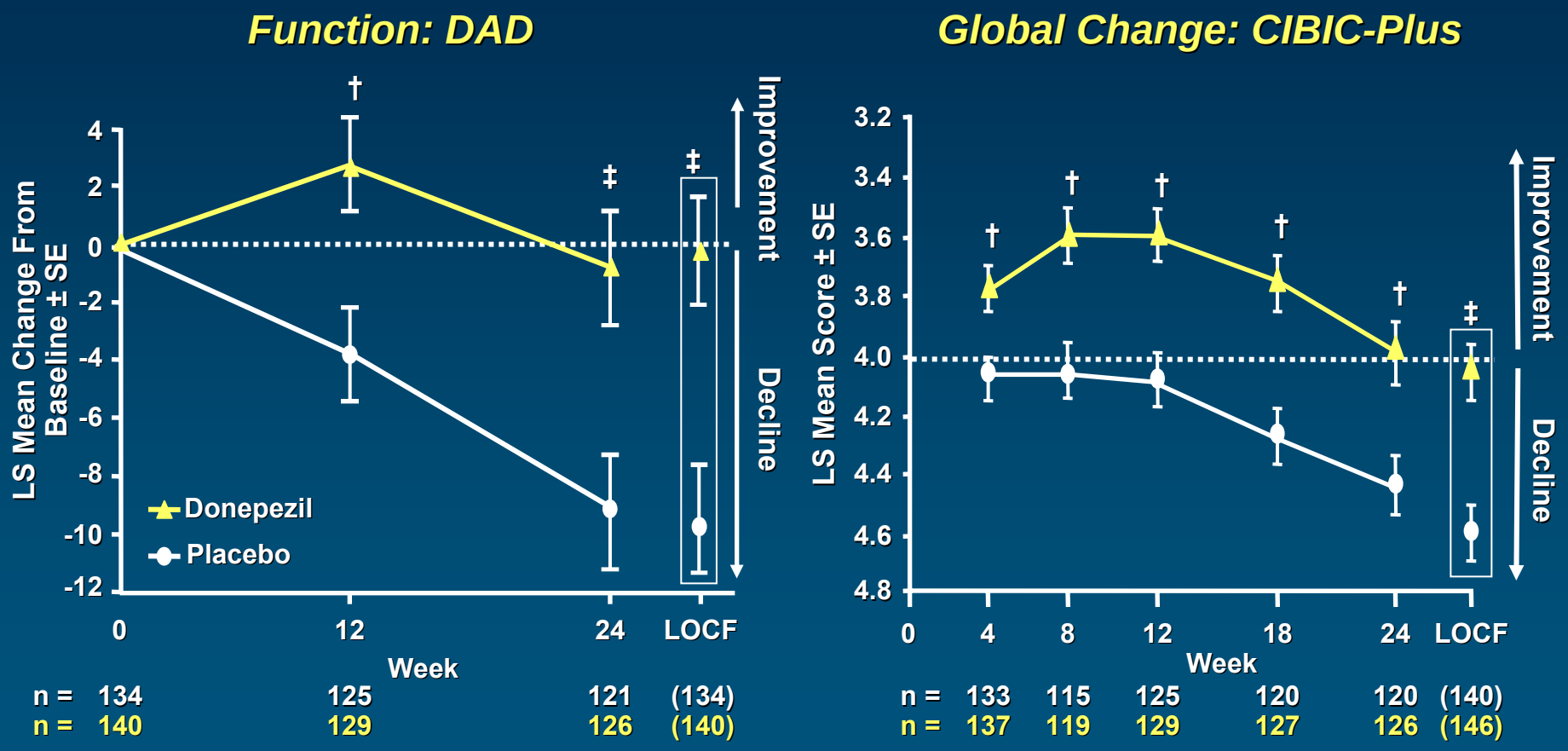
Donepezil Significantly Improved Global Function in Nursing Home Patients

24-Week Clinical Trial of Nursing Home Patients



*P<0.05 compared with placebo.
CDR-SB=Clinical Dementia Rating–Sum of Boxes.
Tariot PN et al. *J Am Geriatr Soc*. 2001;49:1590-1599.

Donepezil Monotherapy in Moderate to Severe AD*: Efficacy



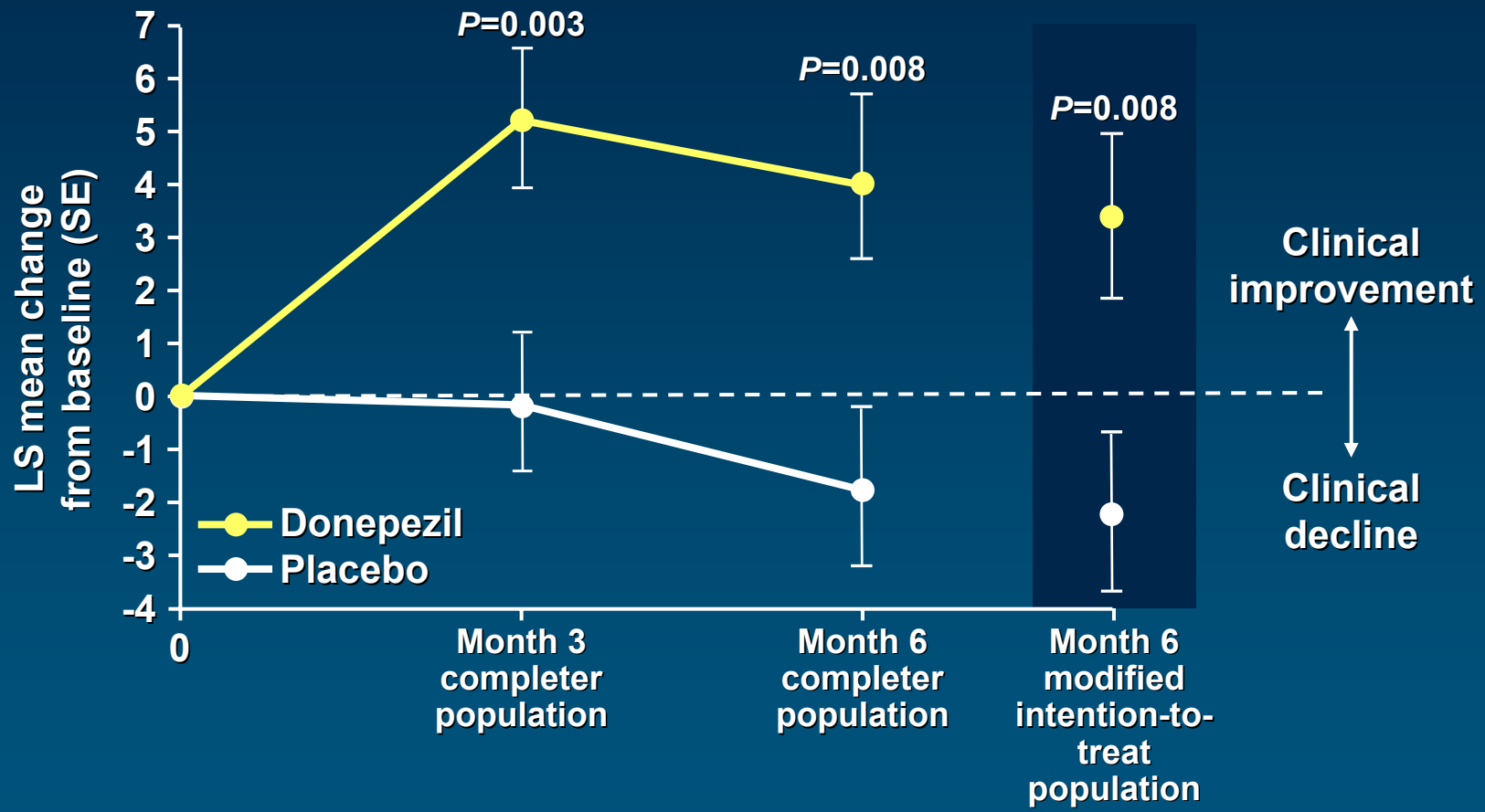
*Cholinesterase inhibitors are not indicated for treatment of severe AD; †P<0.01; ‡P<0.001.
DAD = Disability Assessment in Dementia.
Feldman H et al. *Neurology*. 2001;57:613-620.

Donepezil in Patients With Severe AD: Study Design

Design	6-month, double-blind, parallel group, placebo-controlled study
Population	248 patients with severe AD living in LTC facilities (Sweden) *(MMSE range, 1 - 10)*
Treatment	Donepezil 5 mg/d for 30 days then 10 mg/d (n-128) Matched placebo (n=120)
Endpoints	Primary: SIB, ADCS-ADL-severe Secondary: MMSE, NPI, CGI-I

Winblad B et al. *Lancet*. 2006;367:1057-1065.

Donepezil in Patients With Severe AD: SIB Results



Donepezil (n=109)	109	95	(109)
Placebo (n=107))	107	98	(107)

Winblad B et al. *Lancet*. 2006;367:1057-1065.

Pivotal Trials: Memantine

Study Design	Monotherapy in Moderate to Severe AD[1]	Combination Memantine and Donepezil[2]	Nursing Home Patients With Dementia[3]
Memantine dose	10 mg bid	10 mg bid (plus donepezil)	10 mg qd
Duration in weeks	28	24	12
MMSE range	3-14	5-14	<10
Principal Efficacy Measures			
Global change	CIBIC-Plus	CIBIC-Plus	CGI-C
Cognition	SIB	SIB	
Function	ADCS-ADL$_{19}$	ADCS-ADL$_{19}$	BGP-Care

1. Reisberg B et al. *N Engl J Med*. 2003;348:1333-1341.
2. Tariot P et al. *JAMA*. 2004;291:317-324.
3. Winblad B et al. *Int J Geriatr Psychiatry*. 1999;14:135-146.

Combination Therapy for AD?

Would memantine and ChEIs work together?

Memantine in Patients Receiving Ongoing Donepezil: Efficacy

Design

US phase 3, multicenter (37), randomized, double-blind, placebo-controlled study

Population

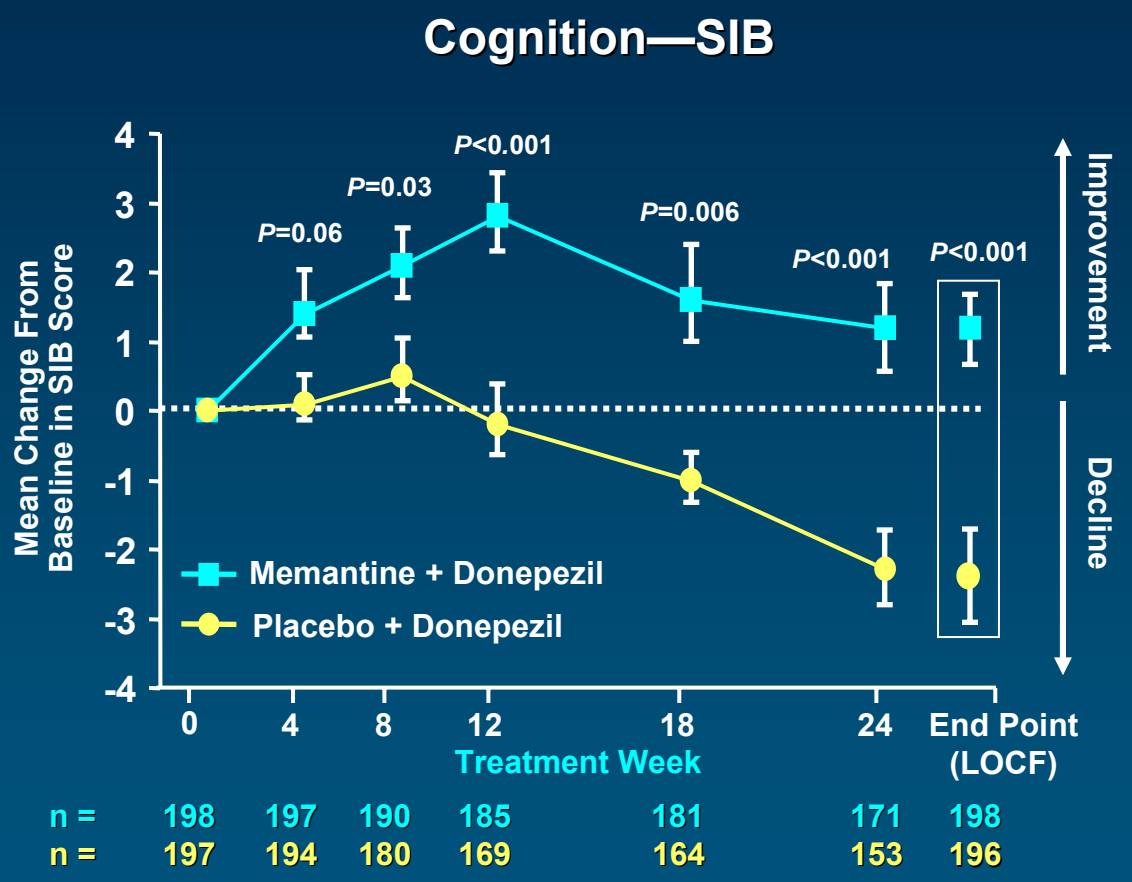
404 outpatients with moderate to severe AD on stable donepezil
(MMSE range, 5-14)

Treatment

Memantine 20 mg/d
(10 mg bid) 4-week titration
(5→10→15→20 mg)

Duration

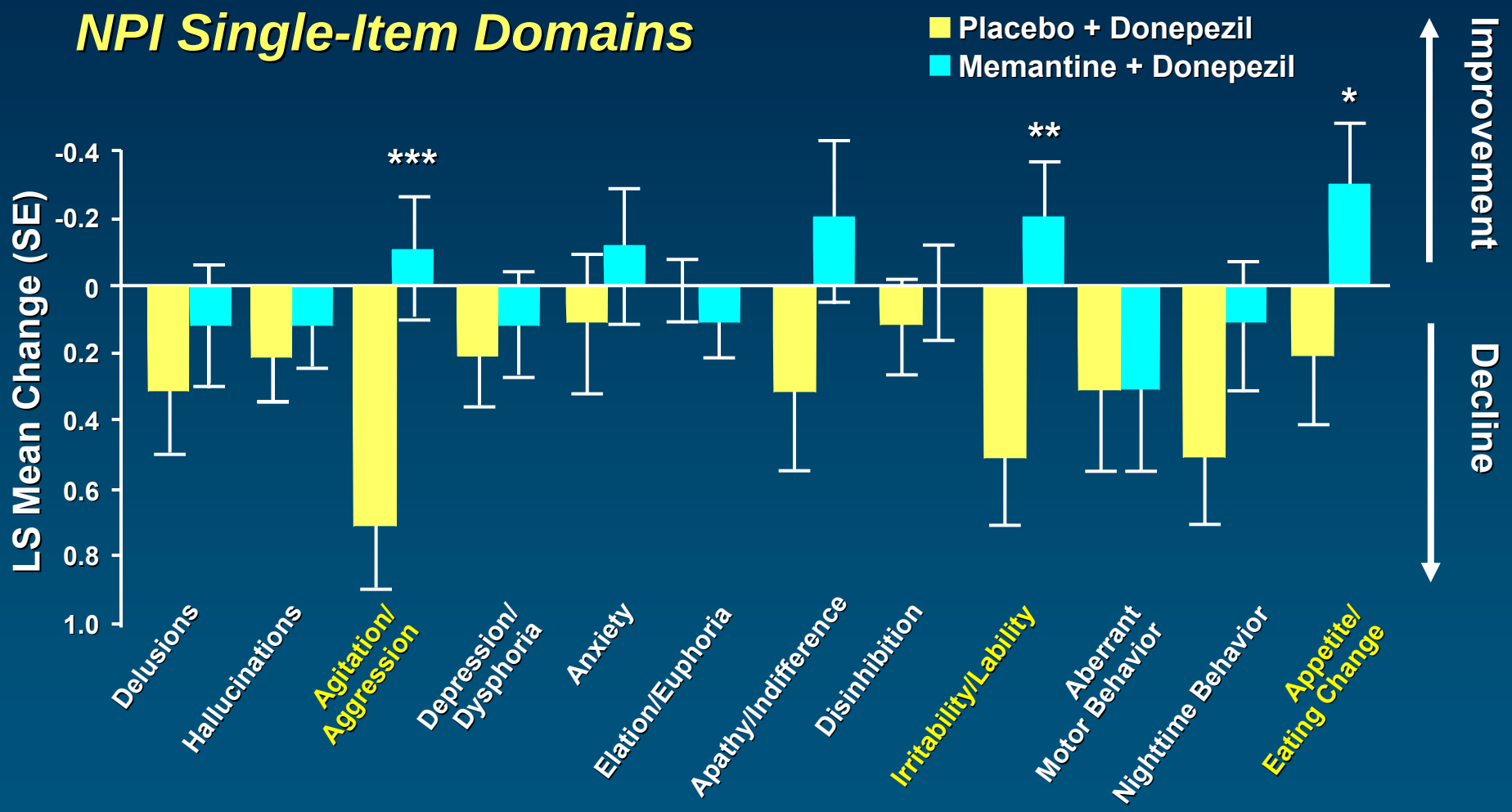
24 weeks



Tariot P et al. *JAMA*. 2004;291:317-324.

Memantine in Patients Receiving Ongoing Donepezil: Behavior

NPI Single-Item Domains



LOCF analysis; *P=0.045; **P=0.005; ***P=0.001.

Cummings J et al. Presented at: 56th Annual Meeting of the American Academy of Neurology; April 24–May 1, 2004; San Francisco, Calif.

Interventions for Dementia-Related Behavioral Symptoms

Nonpharmacologic

- Remove trigger
- Caregiver/family education
- Caregiver support
- Increase staffing ratio
- Activity programs
- Adult day care

Pharmacologic

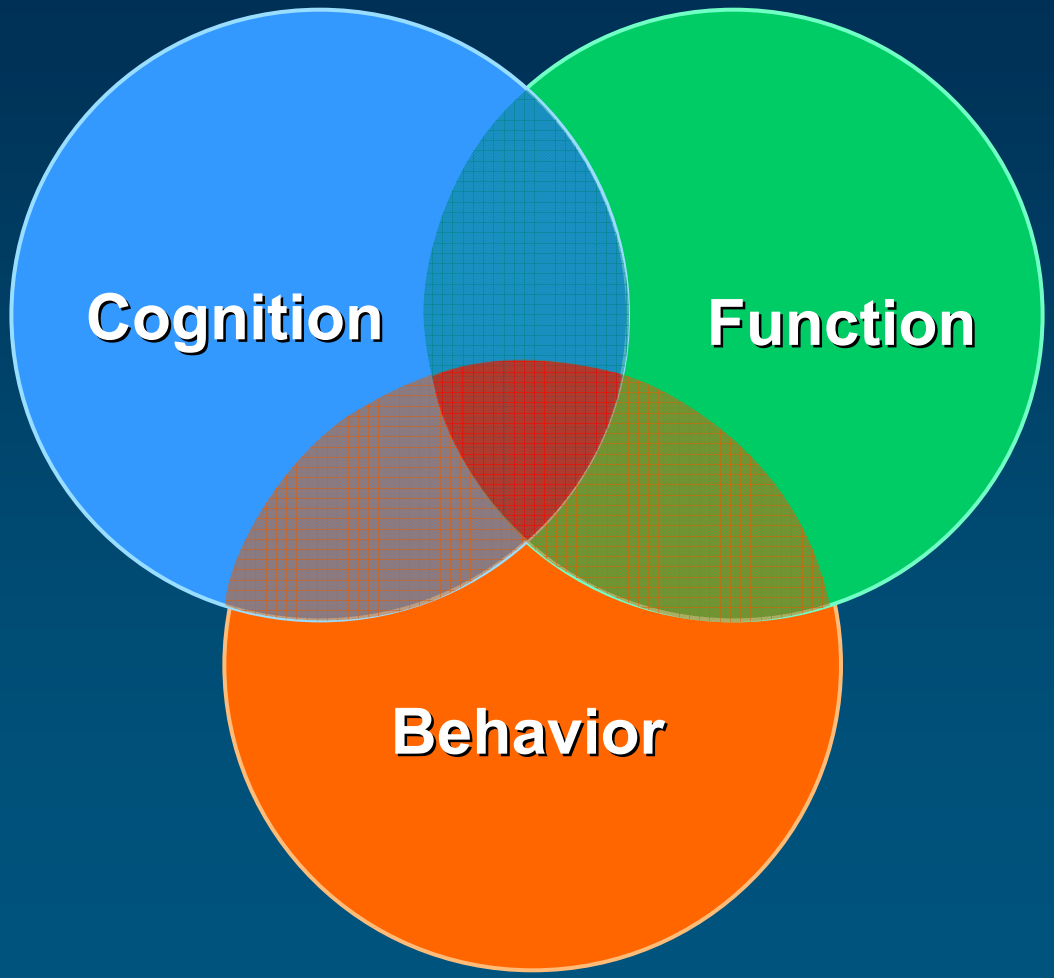
- Antidepressants
- Mood stabilizers
- Antipsychotics*
- Cholinesterase inhibitors
- NMDA-receptor antagonist (memantine)

*Public health advisory from FDA (April 2005): Clinical trials of antipsychotic drugs to treat behavioral disorders in elderly patients with dementia have shown a higher death rate compared to placebo. Specific causes of death were primarily due to heart-related events (eg, heart failure, sudden death) or infections (mostly pneumonia).

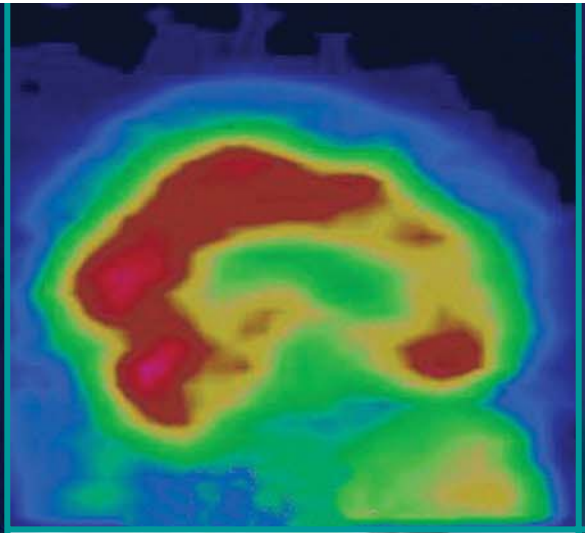
Treatment Consideration: When to Stop?

- May not tolerate cholinergic side effects despite slow and careful escalation
- When medication is prescribed, give it time to work
- Studies suggest that most subjects benefit and that long-term treatment is useful
- May see some deterioration when medication is stopped, so slow taper and monitor

Is Drug Treatment Working?



Is the patient better, worse, or the same compared to the last assessment?



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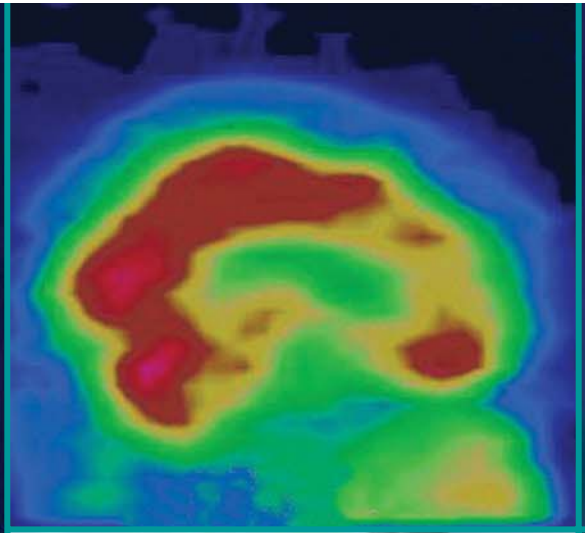


Defining Improved Outcomes in Dementia Management: Patient QOL, Caregiver Burden, and Cost

Patrick Gillette, MD
Medford, Oregon

Objectives

- What is improvement in a progressive disease?
- How do we approach the QOL outcomes for the patient, family and staff?
- When do we use medications?
  Which ones?
- How can we approach end-of-life issues?

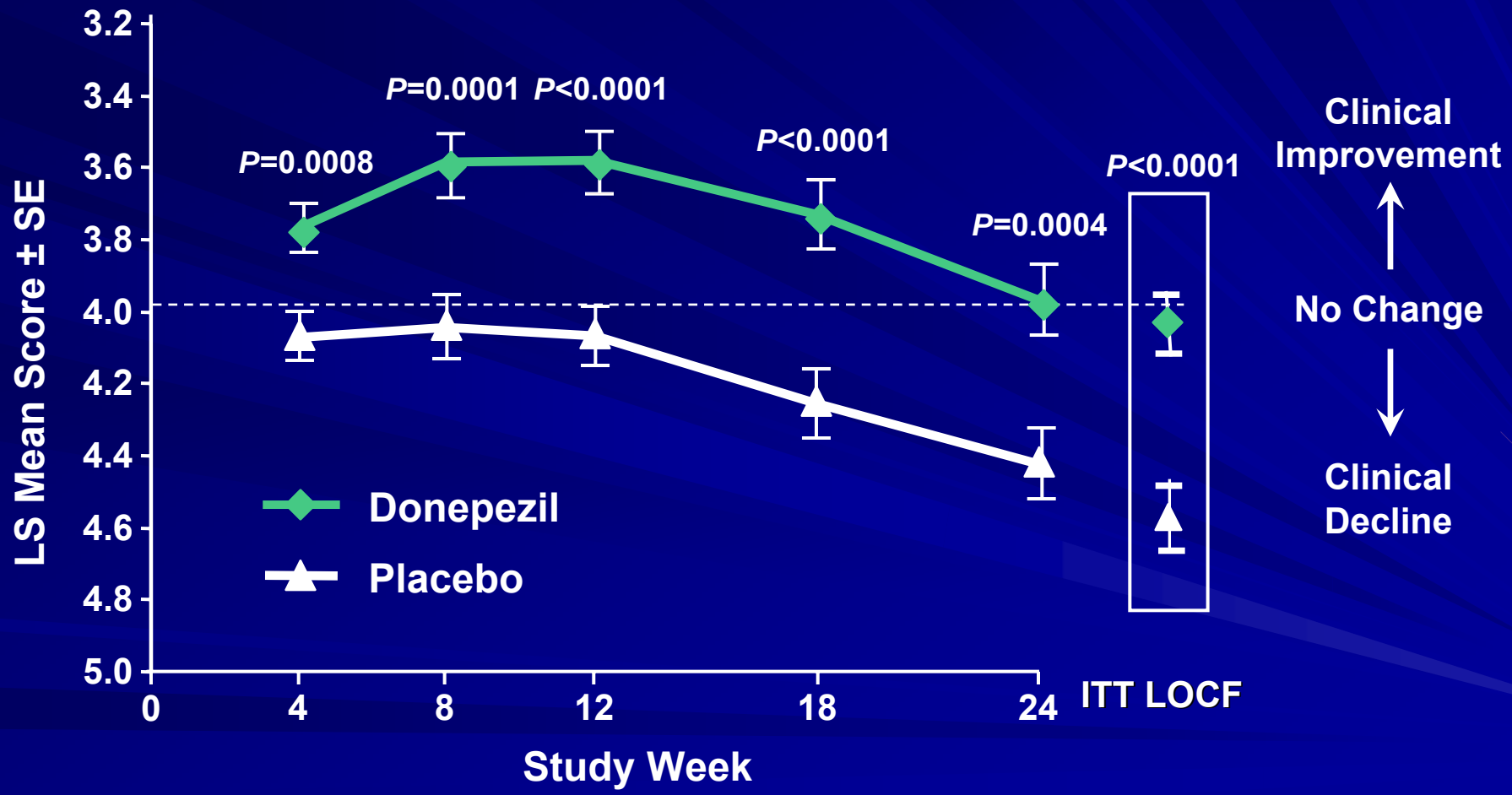
Nonpharmacologic Treatments May Help Caregivers Manage Symptoms

- Sensory stimulation[1]
  - Music therapy
  - Light therapy
- Social contact[1,2]
  - One-to-one contact
  - Pet therapy
- Environment[1]
  - Provide a safe environment
  - Reduce excess stimulation
- Rehabilitation[2,3]
  - Develop a predictable daily routine
  - Simplify tasks
  - Allow independence
- Recreation[4-6]
  - Exercise
  - Sorting
  - Games

[1]Cohen-Mansfield. *Am J Geriatr Psychiatry*. 2001;9:361-381.
[2]Cohen-Mansfield and Werner. *J Gerontol A Biol Sci Med Sci*. 1997;52:M369-377.
[3]Rogers et al. *J Am Geriatr Soc*. 1999;47:1049-1057.
[4]Namazi et al. *J Aging Phys Act*. 1994;2:80-92.
[5]Holmberg. *Arch Psychiatr Nurs*. 1997;11:21-28.
[6]Aronstein et al. *Am J Alzheimer's Dis*. 1996;May/June:26-31.

MSAD Study (MMSE 5-17)

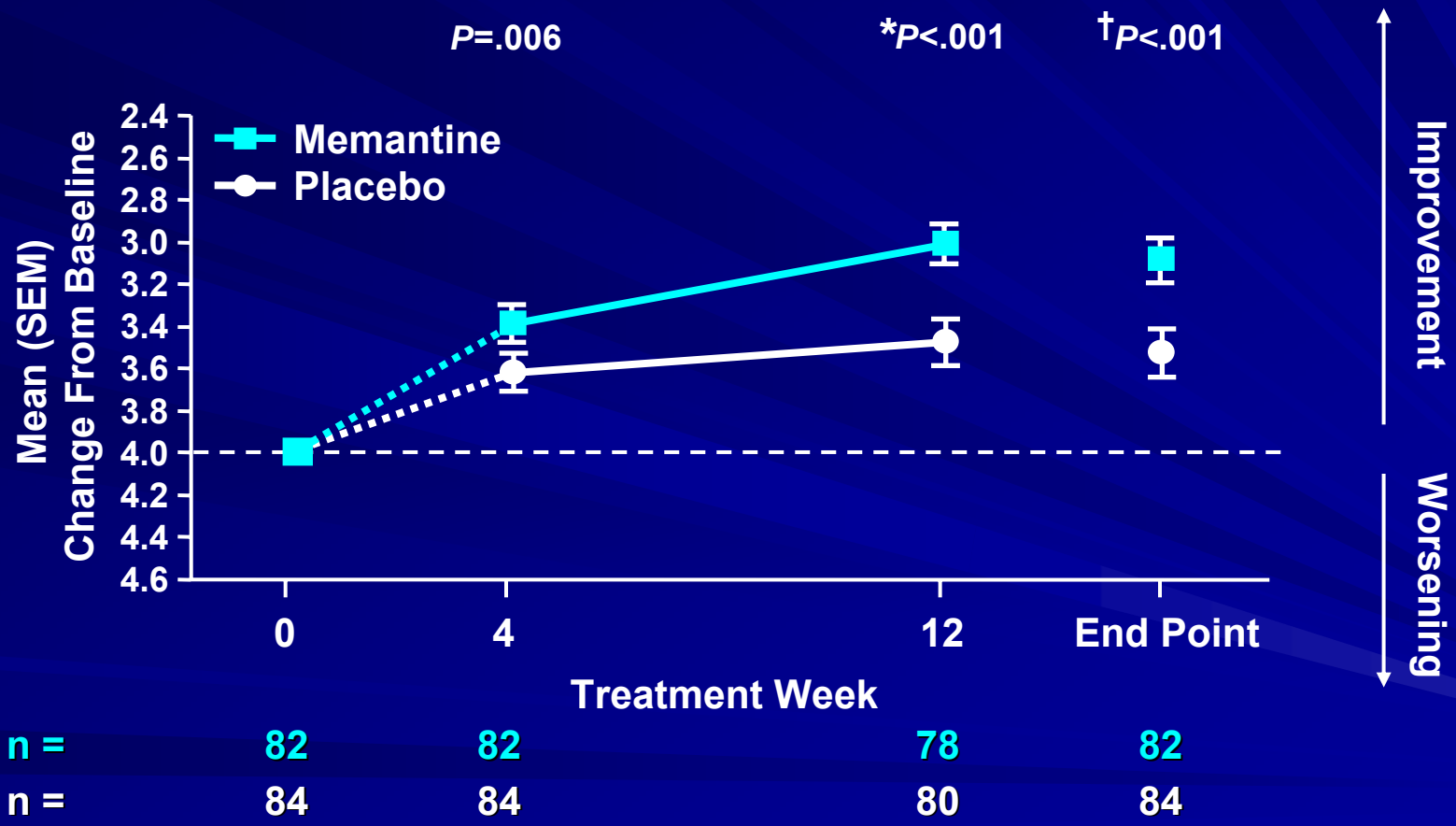
Donepezil Significantly Preserved Global Function: CIBIC-Plus



MSAD Study = Moderate to Severe Alzheimer's Disease Study;
CIBIC-Plus = Clinician's Interview-Based Impression of Change with caregiver input.
Feldman H et al. *Neurology*. 2001;57:613-620.

Memantine in Moderate to Severe Dementia Study

Results: Global Change—CGI-C

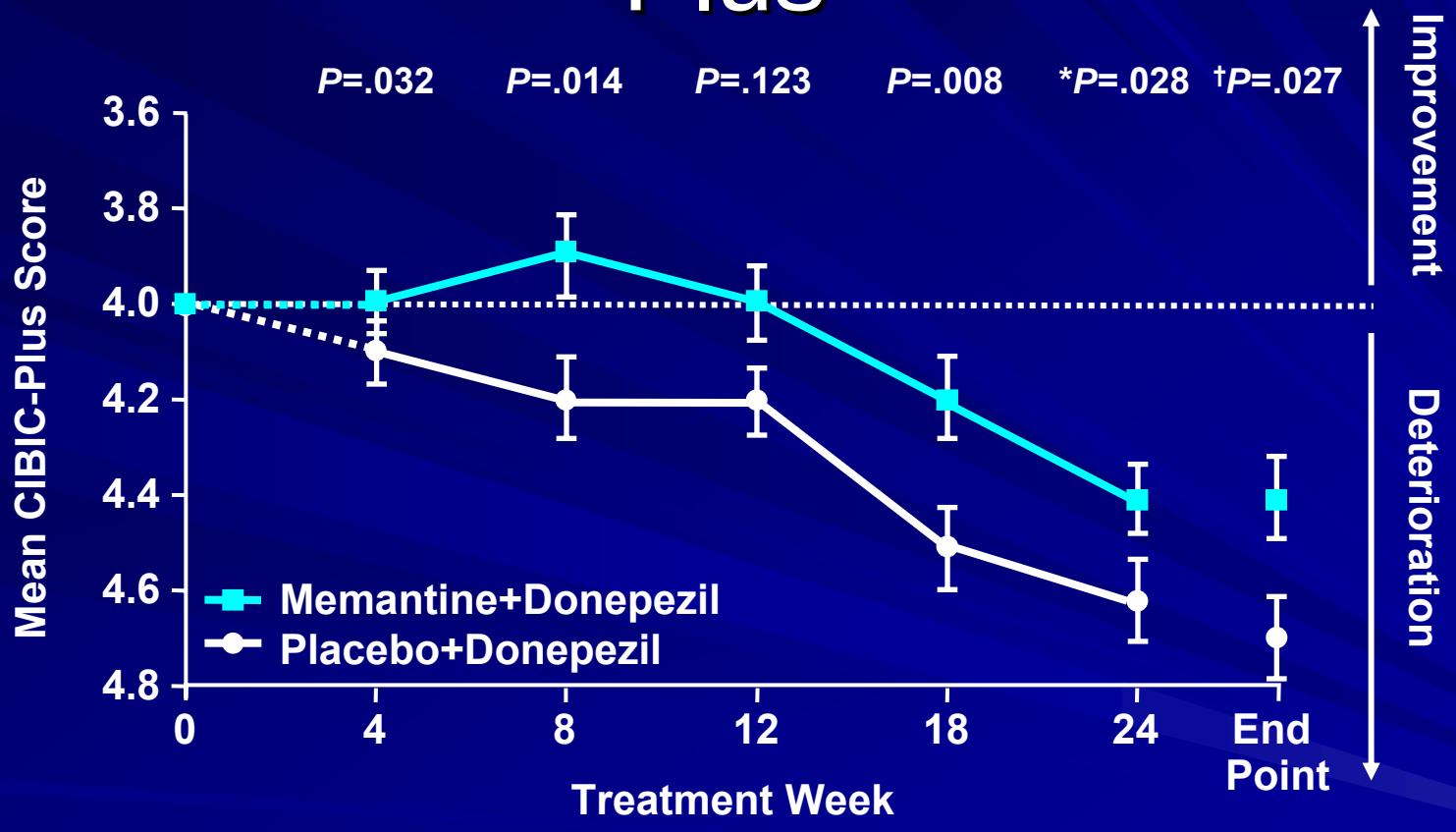


*OC analysis. †LOCF analysis.

Winblad B et al. *Int J Geriatr Psychiatry*. 1999;14:135-146.

Memantine + Donepezil in MSAD Study

Results: Global Change—CIBIC-Plus

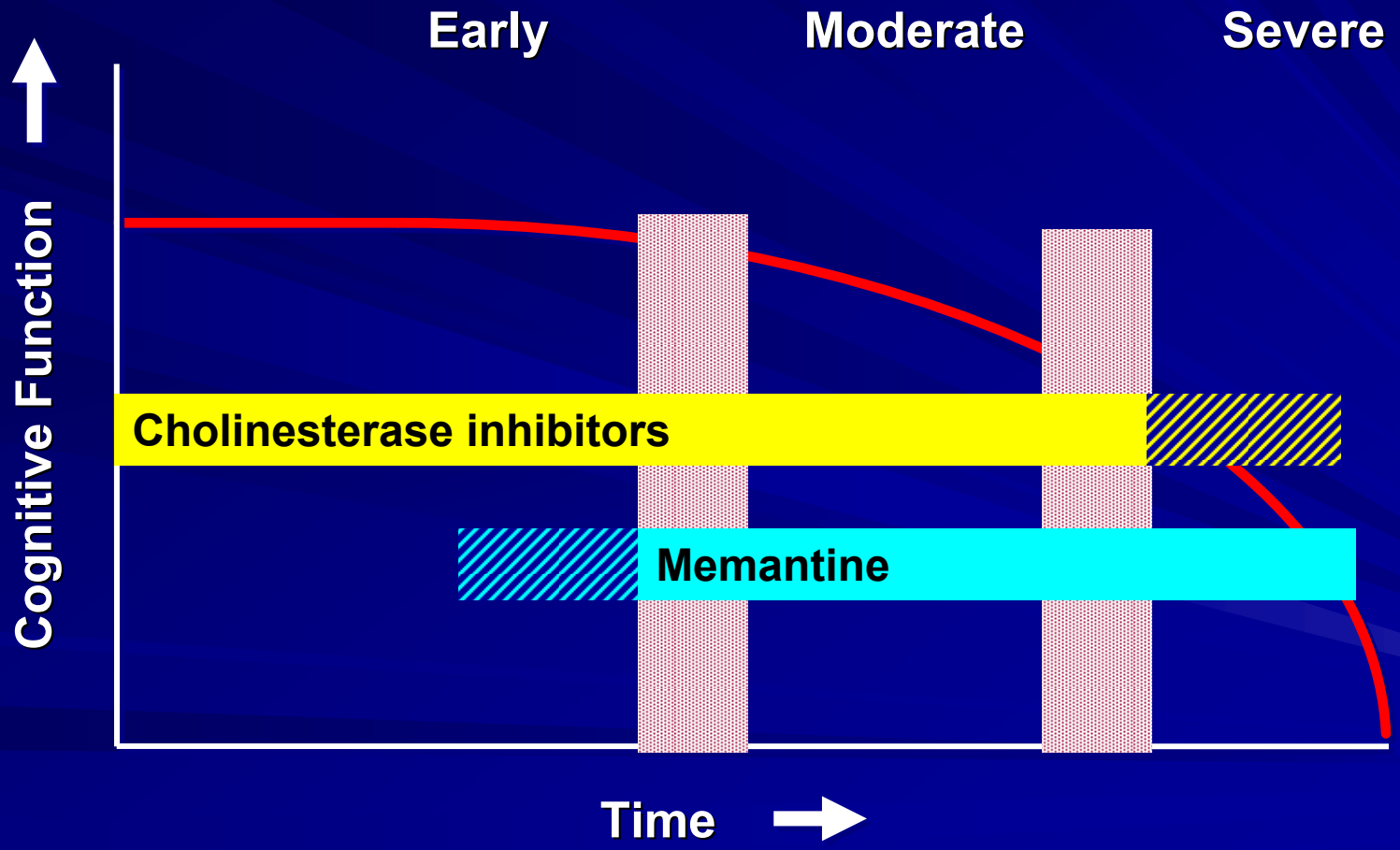


*OC analysis. †LOCF analysis.

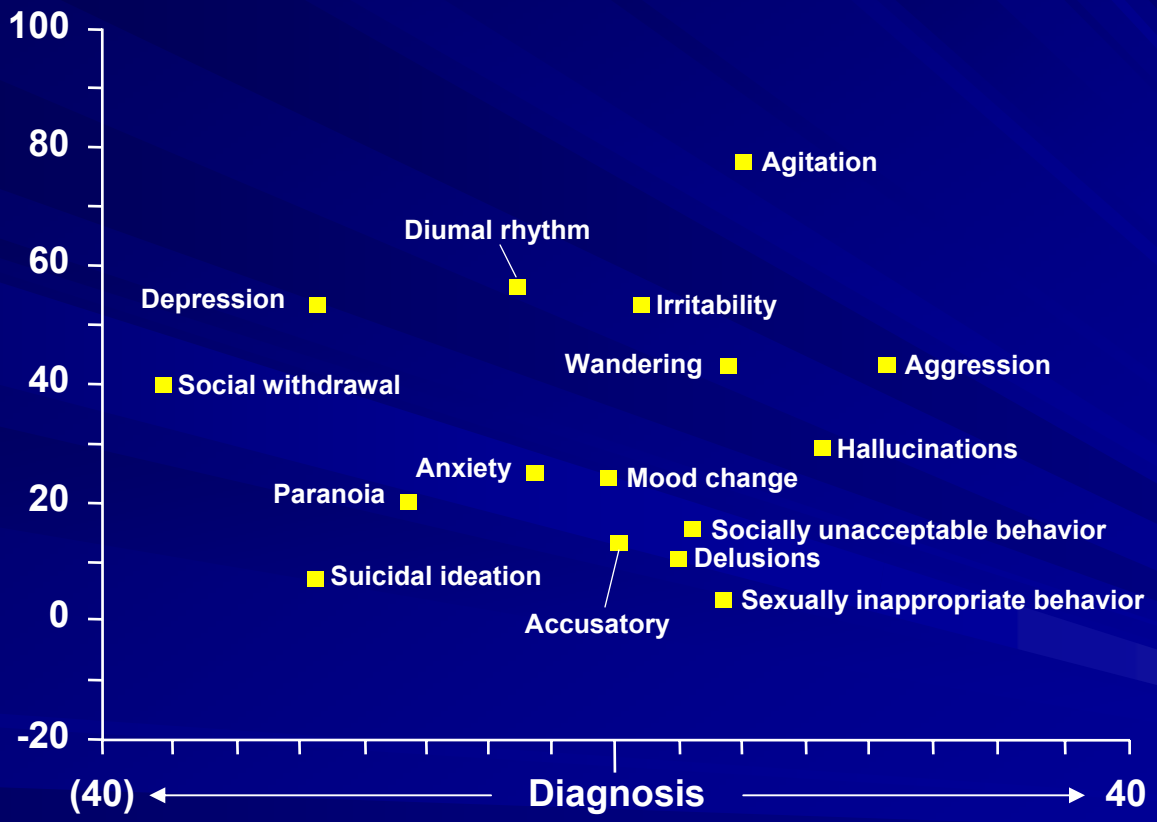
Adapted from Tariot P et al. *JAMA*. 2004;291:317-324.

Data on file, Forest Laboratories, Inc.

Alzheimer's Disease and Treatment



Behavioral Symptoms of AD Evolve Over Time



Adapted with permission from Jost et al. *J Am Geriatr Soc*. 1996;44:1078-1081.

Medical and Psychiatric History: Causes and Aggravators

D – Drugs

E – Emotional illness (including depression)

M – Metabolic/Endocrine disorders

E – Eye/Ear/Environment

N – Nutrition/Neurologic

T – Tumors/Trauma

I – Infection

A – Alcoholism/Anemia/Atherosclerosis/AD

Ham. In: Ham et al, eds. *Primary Care Geriatrics: A Case-Based Approach.* 4th ed. St Louis, Mo: Mosby; 2001:245-308.

Prescription Medication with Anticholinergic Effects

- Cimetidine
- Ranitidine
- Prednisolone
- Theophylline
- Warfarin
- Dipyridamole
- Codeine
- Nifedipine
- Isosorbide
- Digoxin
- Furosemide
- Triamterene and hydrochlorothiazide
- Captopril

Source: Tune L et al. *Am J Psychiatry.* 1992;149:1393-1394.

Psychotropic Medications With Anticholinergic Effects

- Tricyclic antidepressants
  - Amitriptyline
  - Doxepin
  - Imipramine
- Antipsychotics
  - Thioridazine
  - Chlorpromazine
  - Clozapine
  - Olanzapine

FDA and Atypicals in Dementia

- The FDA has determined an increased risk of mortality based on a review of 17 placebo-controlled studies of atypicals in older dementia patients with behavioral disorders
- The odds ratios showed a 1.6-1.7 increase
- The death rates were 4.5% on drug and 2.6% on placebo
- There was no indication that one drug was safer than the others
- None of these agents are approved for use by the FDA in this condition

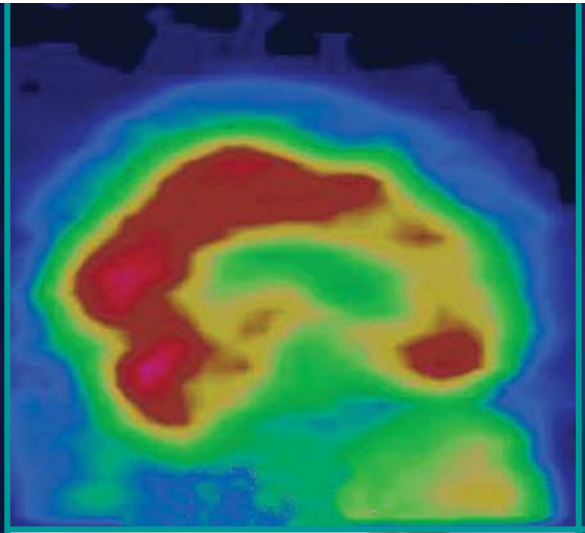
Available at www.fda.gov/cder/drug/advisory/antipsychotics.htm. Accessed June 24, 2005

Final Stages of Dementia

- Personal space = “cocoon”
- Goals of treatment
- Diminishing space
- Behavior disturbances and respecting space
- Activity reduction
- Food and water
- “Benefits of dehydration”

Final Progression of AD

- Timeline
  - Average course of AD = 6-8 years
  - Range of course = 2-20 years
- Most AD patients die from some form of sepsis or “failure to thrive”
- Autopsy finds plaques and tangles (per Dr. Alzheimer’s 1907 findings)

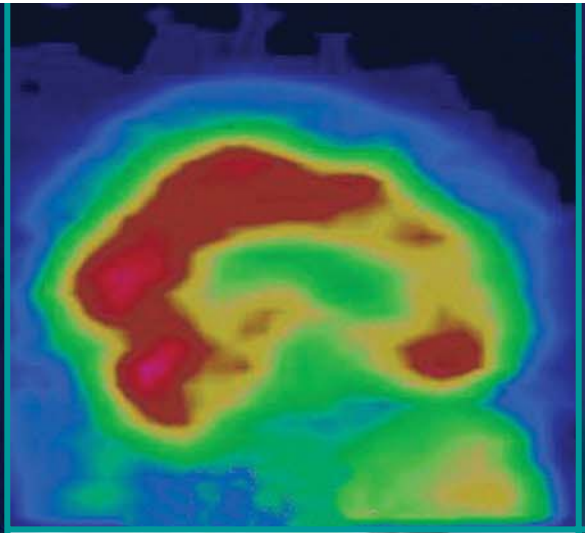


Challenges and Opportunities in Dementia Management:

2006 Update

June 12, 2006

St. Louis, Missouri



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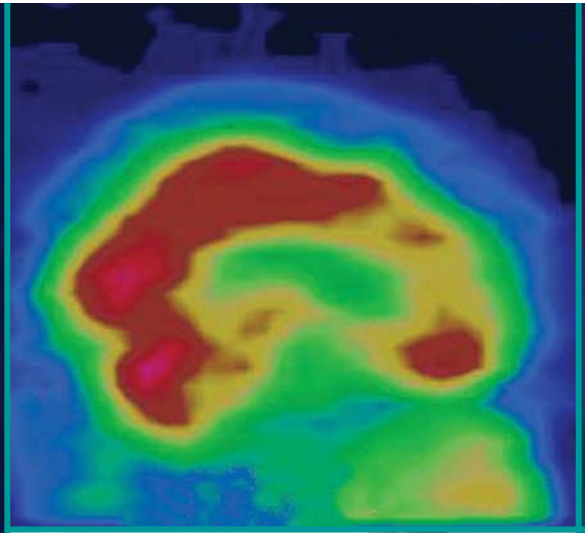
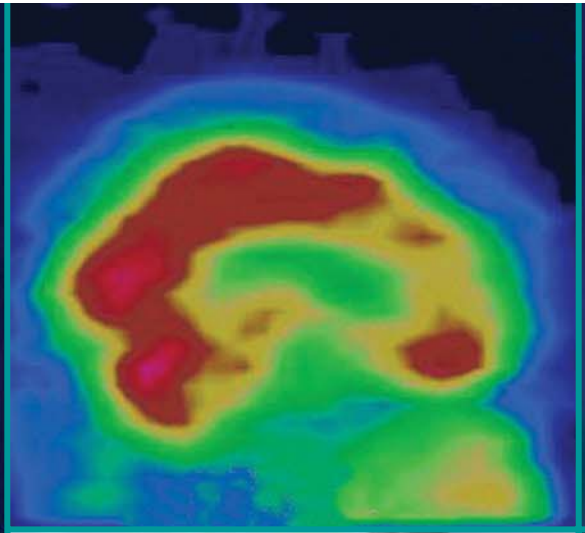


Putting Knowledge into Practice:

A Panel Discussion



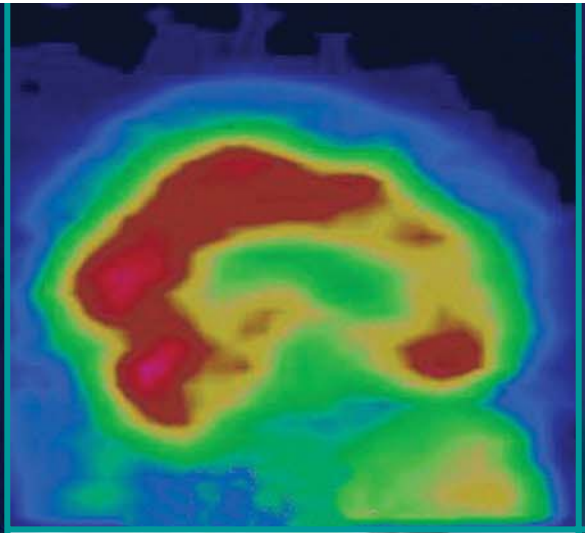
Concluding Remarks

Cynthia D. Steele, RN, MPH
Program Chairperson

Housekeeping

- Please complete Certificate found in program brochure and turn in WHITE copy to meeting staff at conclusion of program
  - Please keep YELLOW copy for your records
- Please complete and turn in evaluation form

Thank you!



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