

CST MEAN SCORE:

9

**STANDARD DEVIATION
1.80, MINIMUM 7,
MAXIMUM 11**

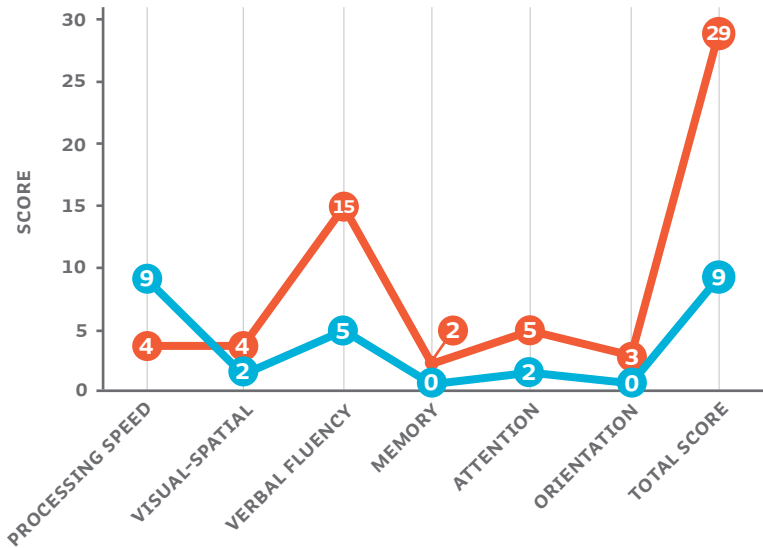
(5) Severe Alzheimer’s Disease (SEV):

The severe AD group shows extreme deficits in all cognitive domains. This group in our database did not show symptoms of anosognosia. Numerous difficulties may be present at this stage of AD, including aphasia (language/communication) and a lack of self awareness and self concept. There may also be difficulties remembering family members names and faces. Additionally, patients may recall long-term memories in place of recent items (eg, remembering adult sons or daughters as children).

Activities of daily living are significantly impaired and, unfortunately, treatment options at this stage of the disease are more limited. Individuals may be unable to operate the toilet and may become incontinent of both urine and stool. They may develop a fear of bathing.

In severe Alzheimer’s disease, ambulation may ultimately be impaired. Education of caregivers and steps to accommodate the supportive care for the patient become increasingly important.

NEUROCOGNITIVE DOMAIN MEAN RAW SCORES FOR ALL SEV GROUPS IN CST DATABASE:



SUMMARY: NOTICEABLE DIFFERENCES BETWEEN THE CONTROL GROUP AND PATIENTS WITH SEVERE ALZHEIMER’S DISEASE ARE FOUND IN ALL AREAS DEFINED, ESPECIALLY IN THEIR PROCESSING SPEEDS, VERBAL FLUENCY, MEMORY, ATTENTION AND ORIENTATION.

LEGEND:

- █ SEVERE ALZHEIMER’S DISEASE
- █ CONTROL GROUP

CST MEAN SCORE:

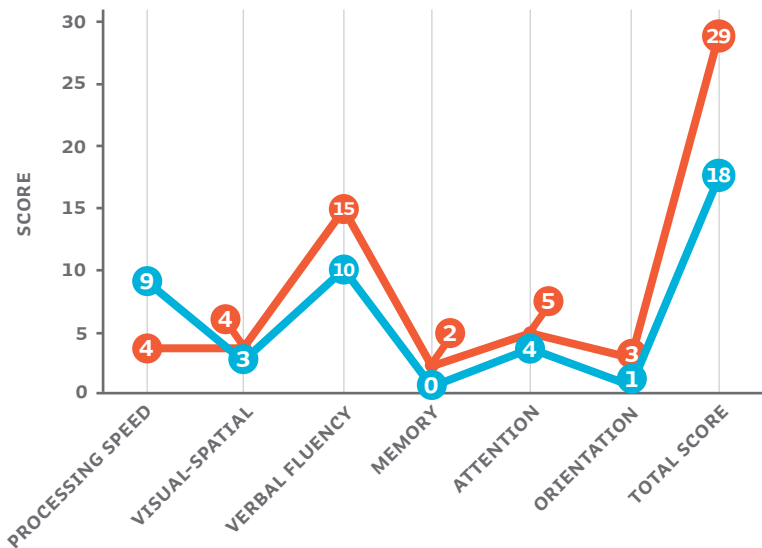
18

STANDARD DEVIATION
1.80, MINIMUM 15,
MAXIMUM 22

(4) Moderate to Severe Alzheimer's Disease (Msev):

Moderate to severe AD shows global deficits in most cognitive domains. Individuals may wear the same clothing repeatedly and may even require assistance in choosing appropriate clothes for the season. Interestingly, nearly half of this group exhibited anosognosic symptoms, or were apparently unaware of deficits in memory and cognitive functions as well as abnormalities in activities of daily living.

NEUROCOGNITIVE DOMAIN MEAN RAW SCORES FOR ALL MSEV GROUPS IN CST DATABASE:



SUMMARY: NOTICEABLE DIFFERENCES BETWEEN THE CONTROL GROUP AND PATIENTS WITH MODERATE TO SEVERE ALZHEIMER'S DISEASE ARE FOUND IN ALL AREAS DEFINED, ESPECIALLY IN THEIR PROCESSING SPEEDS, VERBAL FLUENCY, MEMORY AND ORIENTATION.

LEGEND:

■ MSEV ALZHEIMER'S DISEASE
■ CONTROL GROUP

CST MEAN SCORE:

22

STANDARD DEVIATION
1.50, MINIMUM 19,
MAXIMUM 24

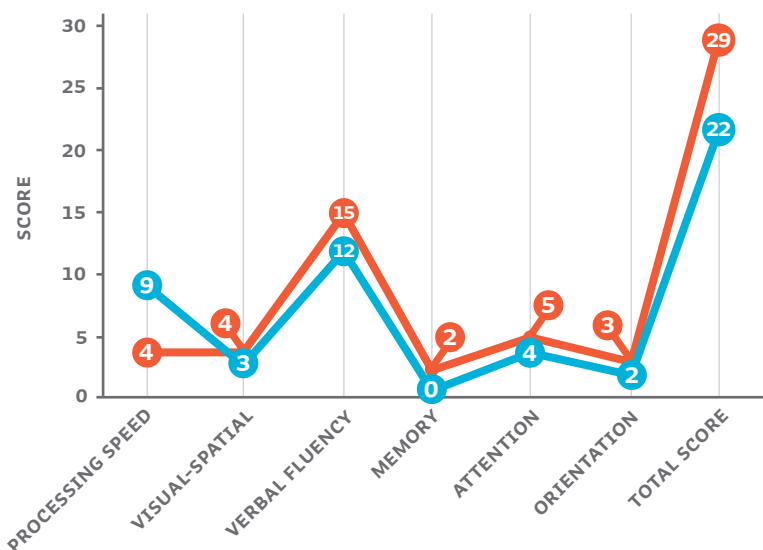
(3) Mild to Moderate Alzheimer's Disease (Mmod):

Mild to moderate AD typically involves impairments in many cognitive domains, with memory and verbal fluency being the most likely to show significant deficits. Medications are very important at this stage of impairment, and intensive monitoring is vital to the overall care and quality of life for the patient.

Decreased ability to perform complex tasks such as preparing meals for guests, handling finances and grocery shopping are often impaired. Activities of daily living (ADL) may also be impaired at this stage of the disease. These deficits depend on individual differences and possibly well-learned behaviors.

This stage may also increase difficulties with interpersonal communication, thereby decreasing social engagement and activities. In our database, very few of the individuals exhibit lack of awareness of deficits in this group. Additionally, motoric skills necessary for driving may also begin to be affected in individuals producing total scores of less than 20. This driving effect has also been shown in research to be associated with MMSE scores less than 20.

NEUROCOGNITIVE DOMAIN MEAN RAW SCORES FOR ALL MMOD GROUPS IN CST DATABASE:



SUMMARY: NOTICEABLE DIFFERENCES BETWEEN THE CONTROL GROUP AND PATIENTS WITH MILD TO MODERATE ALZHEIMER'S DISEASE ARE FOUND IN ALL AREAS DEFINED, ESPECIALLY IN THEIR PROCESSING SPEEDS, VERBAL FLUENCY, AND MEMORY.

LEGEND:

- MMOD ALZHEIMER'S DISEASE
- CONTROL GROUP

CST MEAN SCORE:

25

STANDARD DEVIATION
1.20, MINIMUM 22,
MAXIMUM 27

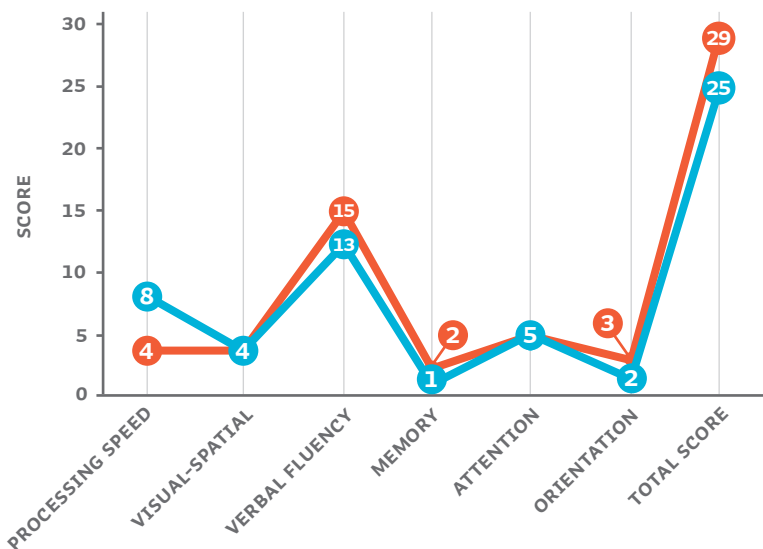
(2) Early Alzheimer’s Disease (EAD):

Early AD is characterized by neurocognitive deficits in two or more cognitive domains. Early AD typically involves impairment in several cognitive domains, with memory being the most likely to show significant deficits. Repeating oneself and asking the same question over again is frequently one of the earliest signs of Alzheimer’s disease.

Difficulty in traveling to a new location and decreased organizational capacity are early symptoms, as well as difficulty in paying bills, writing checks and balancing the checkbook. Medications are very important at this stage of impairment, and further monitoring is vital to the overall care and quality of life for the patient.

Another area of concern is an individual’s reaction to a negative report of memory problems or other cognitive symptoms. In our database, however, 48% of the Early AD group manifests symptoms of anosognosia (unawareness) of memory or other cognitive deficits. In Early AD, activities of daily living may or may not be compromised, and frequently objective confirmation of the clinical history may be necessary. In this stage, the clinical examination and neuroimaging data are often critical in confirming the diagnosis.

NEUROCOGNITIVE DOMAIN MEAN RAW SCORES FOR ALL EAD GROUPS IN CST DATABASE:



SUMMARY: NOTICEABLE DIFFERENCES BETWEEN THE CONTROL GROUP AND PATIENTS WITH EARLY ALZHEIMER’S DISEASE ARE FOUND IN THEIR PROCESSING SPEEDS, VERBAL FLUENCY, MEMORY AND ORIENTATION.

LEGEND:

- EARLY ALZHEIMER’S DISEASE
- CONTROL GROUP

CST MEAN SCORE:

27

STANDARD DEVIATION
1.50, MINIMUM 24,
MAXIMUM 29

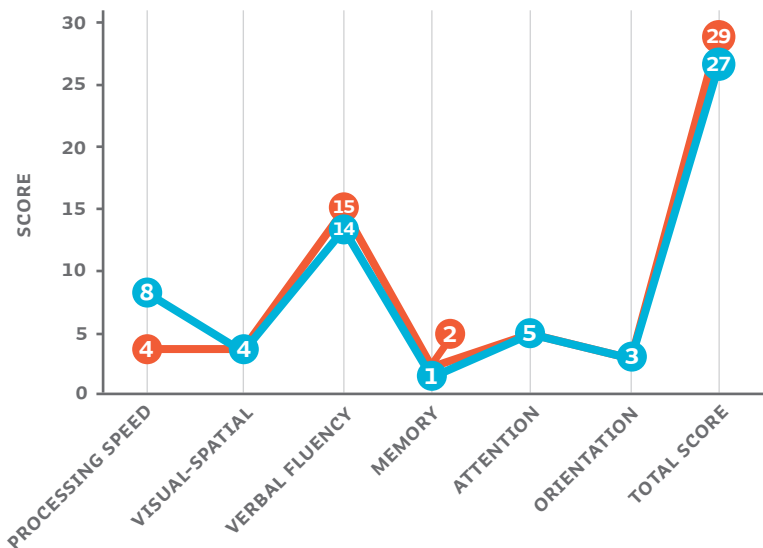
(1) Mild Cognitive Impairment (MCI):

MCI is defined as a change in cognition that is noticed by the individual, as well as by an informant or skilled clinician. Typically, MCI is attributed to a deficit in memory, although occasionally other cognitive domains are involved. Patients with deficits in two or more cognitive domains convert to AD at a greater rate (>8-9%/yr.) than those with impairment only in memory.

In MCI, the patient's performance on neurocognitive tests in an impaired domain such as memory would be 1 to 1.5 standard deviations lower, as contrasted with other domain scores, and lower than would be expected given age and education. Unlike many of the stages within AD, MCI does not impair activities of daily living (eg, paying bills, grooming or preparing meals) and the patient may maintain a subjective awareness of

the deficit. Additional tests to rule out the effects of stress, anxiety, depression or other medical conditions may be warranted since many of these conditions may produce changes in memory.

NEUROCOGNITIVE DOMAIN MEAN RAW SCORES FOR ALL MCI GROUPS IN CST DATABASE:



SUMMARY: NOTICEABLE DIFFERENCES BETWEEN THE CONTROL GROUP AND PATIENTS WITH MILD COGNITIVE IMPAIRMENT ARE FOUND IN THEIR PROCESSING SPEEDS AND MEMORY.

LEGEND:

- MCI ALZHEIMER'S DISEASE
- CONTROL GROUP

CST MEAN SCORE:

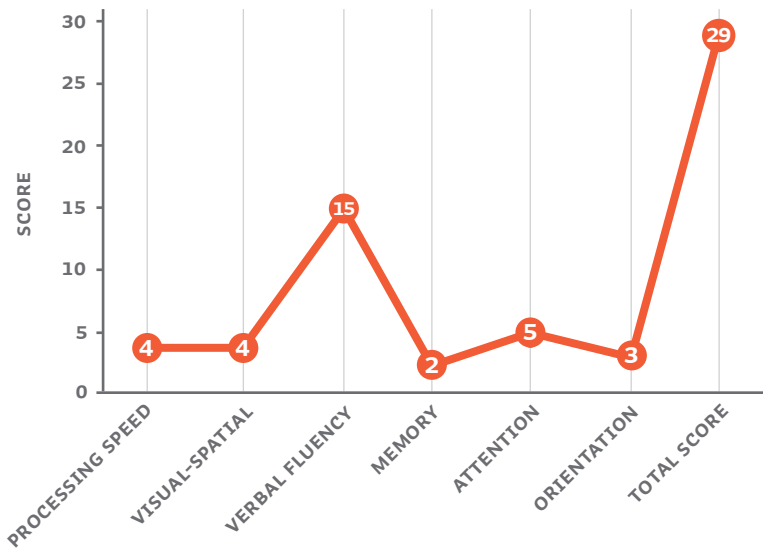
29

STANDARD DEVIATION
1.02, MINIMUM 28,
MAXIMUM 30

(o) Normal Aging:

The normal aging group may or may not show scores lower than the mean. However, such scores do not necessarily reflect any objective abnormalities of cognition, even though an individual may have some cognitive complaints.

NEUROCOGNITIVE DOMAIN MEAN RAW SCORES FOR NORMAL AGING GROUPS IN CST DATABASE:



SUMMARY: THERE ARE NO NOTICEABLE DIFFERENCES BETWEEN THE CONTROL GROUP AND PATIENTS WITH NORMAL AGING.

LEGEND:

— NORMAL AGING