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**CONFIDENTIAL DIAGNOSTIC INTERVIEW
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NAME: Cindy Lund
AGE: 57
DATE OF BIRTH: 10/24/1956
PATIENT #: 48324
DATE OF EVALUATION: 11/6/2013
REFERRED BY: Sarah Batya, MD
EVALUATED BY: Julie E. Redner, Ph.D.

DIAGNOSTIC IMPRESSIONS:

331.9 Possible Major Neurocognitive Disorder due to Alzheimer's Disease, without behavioral disturbance

SUMMARY AND CONCLUSIONS: Cindy Lund is a 57-year-old female referred for neuropsychological evaluation by neurologist, Sara S Batya, MD. Ms. Lund was tested once previously by the current examiner in 2005; please see that PeaceHealth consultation for more information. Screening testing by Dr. Batya using the Montreal Cognitive Assessment on 9/4/13 resulted in a score of 5/30, but Dr. Batya was uncertain whether this was accurate or whether it perhaps was negatively impacted by anxiety. Updated testing was requested to inform Dr. Batya's treatment and safety recommendations, including recommendations for potential ADA workplace accommodations.

Results of testing suggest an individual of probably at least average pre-existing intellectual abilities. Significant deterioration in was noted across all cognitive domains since 2005.

Ms. Lund's overall verbal abilities are in the borderline range (average range in 2005). Her overall visuospatial skills are in the severely impaired range (average range in 2005). Overall auditory attention/concentration is severely impaired (average range in 2005). Ms. Lund was unable to complete clerical measures of speed of information processing due to difficulty understanding them (average range in 2005). On a measure of visual search and sequencing (Trail Making Part A) her performance was severely impaired. When a set switching component was added to this task, she was unable to complete it. Both of these tasks show severe deterioration from 2005. Written math skills are at about the second grade level, down from the eighth grade level in 2005. Confrontation naming is moderately impaired, down from the average range in 2005. Verbal fluency is mildly impaired, down from the average range in 2005

Verbal learning was severely impaired on a 9-item list learning task. Her recall of this list was in the severely impaired range, both after 30 seconds (1/9 words) and after 10 minutes (0/9 words). Verbal recognition was moderately impaired. She made three errors on a forced-choice recognition task. Recall of verbal passages and recall of visual designs was severely impaired, both immediately and after 20 minutes

Ms. Lund denied depression. She acknowledged some anxiety but this did not seem to play a large role in her performance during testing. She expressed a great fear of losing her job, as this provides her with structure, opportunities for socialization, and a sense of productivity. She does not believe that she would cope well if she needed to stay at home alone all day. I agree with that opinion.

Test results appear consistent with a possible Major Neurocognitive Disorder due to Alzheimer's Disease. I am unable to diagnosis a probable Alzheimer's disease due to a lack of information about a causative Alzheimer's disease genetic mutation. She has demonstrated insidious onset and gradual progression of impairment in multiple cognitive domains. Since she was seen in 2005, a maternal relative and a paternal relative apparently have been diagnosed with Alzheimer's disease, but neither with an early-onset form of this disorder.

Internal Medicine * Family Practice * Behavioral Health * Allergy & Asthma

RECOMMENDATIONS:

1. Ms. Lund's cognitive deterioration is to a point that she would be unable to function independently, and she very likely will require assistance and at least some degree of supervision from this point forward. She should not operate a motor vehicle and her husband said that she has given up driving.
2. In an employment setting, Ms. Lund would need to have simple, 1-step instructions in a simple, repetitive job, preferably one she has done for an extended time. She likely would need additional guidance and reminders from co-workers or a supervisor, which by her report, she receives in her current position. She likely should not work with dangerous equipment. She would need to focus on doing one task at a time. She would not function well with change. It sounds as though the University of Oregon presently is providing a sheltered and supportive setting for her.
3. Monitoring of her ability to do her job safely and effectively is recommended. She may encounter difficulty with accuracy, persistence and pace, if she has not already done so. Involvement of the state Vocational Rehabilitation Services is recommended, as they may be able to provide a job coach who could assess her ability to do her job on-site and recommend accommodations after becoming familiar with her actual work setting and hands-on job demands. *2885 Chad Drive (541-686-7878)*
4. At some point, Ms. Lund likely will be unable to continue working. This will be very difficult for her, as she relies on her job for structure and socialization. Consideration of a disability application is recommended.
5. Genetic testing could be considered, if this medically appropriate, to determine whether Ms. Lund has a genetic mutation that is causative/confirmatory of Alzheimer's disease. The pros and cons of such testing should be considered before any actual testing. The Layton Aging and Alzheimer's Disease Center may be a resource in this regard (503 494-7772), as well as for potential participation in clinical trials, if the Lunds are interested in this.
6. At the point that Ms. Lund stops working, supervision and structure are recommended for her while her husband works. I do not know if relatives would be available who could provide this, or whether participation in a group such as that available through the Cascade Health Solutions Active Lives, Active Minds program (541-747-4858) might be an option. A social work consultation may be of benefit. This may be available through PeaceHealth.
7. Use of a medication box, at least some supervision for safety at home, and the purchase of a medical identification bracelet are recommended.
8. Should depression become a problem for her in the future, prompt treatment is recommended.
9. Current test results can serve as a baseline for future comparison, if this is clinically indicated. Please re-refer this individual for testing if such an evaluation is desired.

Yvonne 431-9416

TEST RESULTS AND INTERPRETATIONS:

ALERTNESS/ORIENTATION:

Alert and oriented to the month, but not the day, date or year
Named birth date and city, but not her telephone number or the current or previous president
Identified 2 of 4 famous individuals/historic events. Unable to identify a recent news topic.

ATTENTION/CONCENTRATION/SPEED:

Severely impaired overall ability to attend to, hold and process information, and respond
WAIS-IV Working Memory Index = 50, less than the 0.1st percentile
Severely impaired auditory attention span
Severely impaired mental arithmetic

Unable to complete two clerical measures of speed of information processing

Severely impaired score on a test requiring visual scanning, sequencing, motor output (Trail Making A)
Unable to complete task when a set-switching component was added the above measure (Trail Making B)

VERBAL ABILITIES:

Borderline overall verbal abilities

WAIS-IV Verbal Comprehension Index = 74, 4th percentile.

Low average knowledge of vocabulary

Moderately impaired fund of information

Mildly impaired abstract verbal generalization

ACADEMIC ACHIEVEMENT: WJ-III NU

Written math skills were similar to those of a typical student at the 2nd grade level, and in the severely impaired range compared to her age peers

SPEECH AND LANGUAGE PROCESSING:

Fluent and functional speech; difficulty with word finding and speech formulation observed

Functional ability to understand and respond to only simple test instructions/interview questions

Moderately impaired confrontation naming. Possible intermittent verbal apraxia and frequent word mispronunciations were noted

When asked to write a complete sentence, she produced a sentence fragment with one misspelling

Able to follow 3/3 one-step commands, 1/2 two-step commands, and 0/1 three-step command.

VISUAL-PERCEPTUAL AND PERCEPTUAL-MOTOR FUNCTIONING:

Severely impaired overall visual/visuospatial abilities

WAIS-IV Perceptual Reasoning Index = 56, 0.2nd percentile

Moderately impaired visuospatial skill

Moderately-to-severely impaired abstract visual reasoning

Unable to draw a clock face and place the numbers and place the numbers in it

Unable to set the clock's hands to a requested time

LEARNING AND MEMORY PROCESSES:

Verbal learning and memory

Severely impaired learning of 9-item list over four learning trials

Severely impaired 30-second recall (1/9 words)

Severely impaired 10-minute delayed recall (0/9 words)

Moderately impaired recognition of list items from a larger group

3 errors on a forced-choice recognition measure

Recall of verbal passages

Severely impaired immediate recall of two verbal passages

Severely impaired 20-minute recall of two verbal passages

Moderately impaired recognition of verbal information from passages

Visual memory

Severely impaired immediate recall of five geometric designs

Severely impaired 20-minute recall of five geometric designs

Moderately impaired recognition of five visual designs from a larger array

HIGHER COGNITIVE FUNCTIONING:

Able to initiate, monitor and regulate motor and verbal behavior during testing session.

Orderly overall approach to testing

Mildly impaired letter fluency (COWAT)

Mildly impaired category fluency (Animal Naming)

Generally good verbal problem solving on brief screening

EMOTIONAL/PSYCHOLOGICAL:

Unable to complete Beck Depression Inventory – II; her degree of comprehension of this measure was unclear.

PROCEDURES: Ms. Lund was interviewed on 11/6/13. Testing was not completed on that date due to insurance company prior authorization requirements. She was tested for two hours 28 minutes on 11/30/13. About 30 minutes of records review, 32 minutes of test scoring, and more than an hour of report preparation were completed. The following measures were administered:

| | |
|---|---|
| Wechsler Adult Intelligence Scale - IV (WAIS-IV); selected subtests | Selected geriatric neuropsych. tasks |
| Woodcock-Johnson Psychoed. Batt. - III (WJ-III); Calc. subtest | Trail Making Test |
| California Verbal Learning Test – II Short Form (CVLT-II SF) | Wechsler Memory Scale IV; selected subtests |
| Controlled Oral Word Association Test (COWAT) | Animal Naming Test |
| Orientation/Long-Term Memory Test | Boston Naming Test |
| Beck Depression Inventory- II (BDI-II); discontinued | |

Behavioral Observations: Ms. Lund had white, curly hair and blue eyes, and was below average height and average build. Her appearance was neat, her dress was appropriate, and she was well groomed. She was right hand dominant. She wore reading glasses and appeared to have some difficulty seeing. Her speech was notable for word finding problems, mispronunciations, occasional apparent verbal apraxia, and difficulty with verbal self-expression. No obvious problems were noted in her hearing. Her motor skills appeared age and task appropriate. Rapport was easily established with this individual who appeared socially confident and comfortable. She seemed to speak with the examiner freely.

During testing, Ms. Lund understood simple instructions and maintained good interest and effort, with an orderly approach to assessment tasks. Some repetition of instructions or elaboration on those instructions was required for her to understand assessment tasks. She seemed challenged by difficult test items and praise appeared to stimulate her task performances. She demonstrated poor concentration but was appropriately persistent on the tasks requested of her. She generally recognized her errors and reacted realistically to them. Overall results of testing appear to be a good representation of her current functional abilities.

INTERVIEW AND OBSERVATIONS: The following historical and clinical information is based on available records, Ms. Lund's self-report, and the report of her husband, Jon Lund.

Psychosocial History: Ms. Lund was born in Pittsburgh and raised by her parents, who divorced when she was about 19. She has a younger brother and an older sister. She has no communication with her younger brother. Her mother was a secretary, is in her 70s, and is in satisfactory health. Her father made his career in the Army and then was an airport shuttle driver; he died of lung cancer at age 72. Her sister is in good health.

Ms. Lund graduated from high school and attended Los Angeles Valley College, where she obtained an AA in English with honors and was on the dean's list. She most liked reading and she struggled with math.

She married at age 21 for a couple of years, with an adult son from that marriage, Wes. She reported emotional and physical abuse in her first marriage. She remarried around age 25 for about 12 years with no children from that relationship. Her second husband reportedly was alcoholic. She married Jon at age 34 and they remain married. They have a daughter, Shelby, who is 22.

Ms. Lund did not serve in the military and reported no legal problems. She moved frequently as a child due to her father's military service and attended about 12 different schools. She moved to the San Fernando Valley at age 13 and remained there until 1988. She has resided in Creswell since that time.

Employment History: Ms. Lund works in food service at the University of Oregon, primarily washing dishes from 8 a.m. until 5 p.m., Sunday through Thursday. She said that she benefits from structure in her life and the social contact it provides. She worked at the Duck's Grab and Go, was moved to a new location, struggled to adjust to the new situation, and became quite stressed. She was there for three weeks and then was returned to her previous job site. She likes it there and said that her coworkers help guide her and take care of her. She reported lower stress in this supportive environment. She would like to continue in her current job.

Previous employment was at a grocery store within the University of Oregon (UO) where she was responsible for stocking. The store was co-located with a hot food line and food court, and she worked there for about 2-3 years. She tried a cashier position but was unsuccessful. Prior to that, she worked in food service management for a total of about eight years, ending when she was no longer able to do it. She has worked in food service at the University of Oregon for a total of about 18 years. Previous employment was in rentals, retail, phlebotomy, and restaurants.

Medical History: Ms. Lund has a history of atrial myxoma treated with surgery in 1985. She reported that she was on a heart-lung machine for a number of hours but did very well in community college after that time and has had no cardiac problems since. She has had bursitis in her right hip, GERD, migraine headaches past pneumonia, a past back injury and past vertigo. She reported no head traumas or seizures. She reported two cesarean sections, past sinus surgery, a tonsillectomy and a tubal ligation. She apparently has had memory complaints since 1998 and has had chronic mild dysthymia and stress. She said that she has been diagnosed with Alzheimer's disease. She said that a paternal aunt developed Alzheimer's disease in her mid-to-late 70s, and a maternal grandmother developed Alzheimer's disease in her early-to-mid 80s.

MRI of the brain on 8/7/05 reportedly revealed no evidence of acute ischemia or intracranial mass. A single focal T2 hyperintensity was identified in the deep white matter of the centrum semiovale overall and was viewed as a nonspecific finding likely related to microvascular ischemic disease.

Records report migraine without aura, chronic dysthymia, associated memory symptoms since 1988, medication noncompliance, congenital cardiac disease, a work injury with cervical, thoracic and lumbar strain (10/06), L4-S1 spondylosis, GERD, osteoporosis, hyperlipidemia and early dementia. She had cardiac surgery at age 18, sinus surgery, breast augmentation, cesarean sections, and a tubal ligation. In March 2010 she received a score of 19/30 on the Montréal Cognitive Assessment. In an appointment on 9/04/13 she received a MoCA score of 5/30. Ms. Lund apparently was very anxious during that testing and attributed her difficulty on the testing to her anxiety. Dr. Batya's impression was that her memory problems had progressed and her husband felt that Ms. Lund's ability to speak, write and remember had worsened over the last three years, requiring him to take over more responsibility for daily tasks. Dr. Batya's records note frontal release signs and apraxia, but she was uncertain whether screening had result in an accurate representation of her cognitive abilities. She was referred for repeated neuropsychological testing to obtain updated information about this.

Ms. Lund believes that she can perform all of her work tasks without accommodation. Dr. Batya requested feedback about this as she may need Americans with Disabilities Act protection, and Dr. Batya needs data to inform her recommendations for appropriate accommodations. Testing may help to point out relevant safety concerns, both at home and at work.

Current Medications: Aricept, Midrin, Imitrex, Dexilant, Fosamax, acyclovir ointment (prn), Solaraze gel, estradiol, vitamin D3. She stopped taking simvastatin and now takes green tea pills instead. Records report an ALLERGY TO NAMENDA.

Psychiatric History: Ms. Lund reported no psychiatric hospitalizations, suicide attempts, assaults or mental health treatment. She reported past cognitive rehabilitation with Clay Bean, Ph.D. In her previous appointment (2005), Ms. Lund reported a complex upbringing, in that her mother was very negative and would tell on them to their father, who was the disciplinarian. She said that both parents drank, but that her mother became bitter and angry when she drank, as opposed to her father, who became more fun. She apparently heard fights and hitting when her parents drank. She and her sister used to get into bed together for comfort during these fights, and she would sleep with a pillow over her head.

Current Psychiatric Status: Ms. Lund reported no current depression. She said that she is "happy to be here" and is able to enjoy pleasant activities. She reported no problems with sleep, no feelings of worthlessness or guilt, and a normal appetite. She reported some difficulty focusing when she feels overwhelmed. She reported no suicidal ideation, homicidal ideation or hallucinations. She has no history of mania.

Habits: Ms. Lund drinks decaffeinated coffee. She no longer drinks alcohol. She reported experimentation with marijuana in the distant past. She reported no other illicit substance use and no use of tobacco.

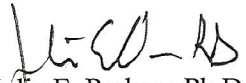
Current Complaints/Review of Systems: Ms. Lund reported no recent headaches, blackouts or dizziness. She wears prescription glasses. She reported good hearing, a hypersensitive sense of smell, and a normal sense of taste. She typically sleeps about eight hours per night.

Ms. Lund reportedly has developed word finding problems and difficulty with verbal self-expression in the last couple of years. While her route finding has never been strong, this has declined and she no longer drives. She reported reduced concentration and greater difficulty with recall than before. She forgets things that she and her husband have talked about, and she asks repetitive questions. She is unable to think clearly or quickly. She remains able to read and write. Her vocabulary has declined, and word finding problems and paucity of speech were noted.

Current Situation/Daily Living Skills: Ms. Lund lives at home with her husband and a Dalmatian. She works the same schedule as her husband; this is important because she is unable to provide her own transportation and it helps give structure to her day. She no longer pursues many past activities, but does enjoy going for a ride with her husband or occasionally, out to a movie. He now does the cooking and money management because of her difficulty with these tasks. She is able to dress and undress, feed herself, and do the cleaning and laundry. She spends her time with her husband and with her friends at work. She relies on her husband and her mother for emotional support.

On a typical day, Ms. Lund gets up at 7 a.m. She gets ready for her day and works from 8 a.m. until 4:30 p.m. She goes to bed around 9 p.m.

Thank you for this referral. Please feel free to call me at (541) 431-0000 if this report raises questions for you, or if further information would be useful.


Julie E. Redner, Ph.D.
Licensed Psychologist

NEUROPSYCHOLOGY TEST SCORE SUMMARY SHEET

Name: Cindy Lund

Age: 57

Date: 11/30/2013

RIGHT Hand Dominant

WECHSLER ADULT INTELLIGENCE SCALE-IV (WAIS-IV) Subtests and Composite Scores

| <u>Verbal</u> | <u>Scale Score</u> | <u>Perceptual Reasoning</u> | <u>Scale Score</u> | <u>Working Memory</u> | <u>Scale Score</u> |
|---------------|--------------------|-----------------------------|--------------------|-----------------------|--------------------|
| Similarities | 6 | Block Design | 3 | Digit Span | 1 |
| Vocabulary | 7 | Matrix Reasoning | 2 | Arithmetic | 1 |
| Information | 3 | Visual Puzzles | -- | Letter-Number Seq. | -- |
| Comprehension | -- | Figure Weights | -- | | |

| <u>Processing Speed</u> | <u>Scale Score</u> | <u>COMPOSITE SCORE</u> | <u>INDEX SCORE</u> | <u>PERCENTILE</u> |
|-------------------------|--------------------|------------------------|--------------------|-------------------|
| Symbol Search | -- | VERBAL COMPREHENSION | 74 | 4 |
| Coding | -- | PERCEPTUAL REASONING | 56 | 0.2 |
| Cancellation | -- | WORKING MEMORY | 50 | <0.1 |
| | | PROCESSING SPEED | -- | -- |
| | | FULL SCALE | -- | -- |
| | | GENERAL ABILITY | -- | -- |

WOODCOCK-JOHNSON PSYCHO-EDUCATIONAL BATTERY - Third Edition (WJ-III)

| <u>Subject</u> | <u>Age</u> | <u>Grade</u> | <u>Stand. Score</u> | <u>Stand. Score</u> | <u>Grade</u> |
|----------------|------------|--------------|---------------------|---------------------|--------------|
| Calculation | 53 | 33 | 33 | 33 | 2.0 |

ORIENTATION/LTM: Errors: 8
TRAIL MAKING TEST: Part A = 210 seconds; Part B = discontinued
CONTROLLED ORAL WORD ASSN.: Total = 24; Perseverations = 1; Intrusions = 2
ANIMAL NAMING: Total = 12; Perseverations = 2; Intrusions = 0
BOSTON NAMING TEST: Correct: 41/60

CALIFORNIA VERBAL LEARNING TEST - II Short Form (CVLT-II SF) (9-item list):

Learning Trials: 1, 1, 1, 3
 Short-Delay Free Recall: 1
 Long-Delay Free Recall: 0
 Long-Delay Cued Recall: 1
 Long-Delay Recognition: Correct = 6 False Positives = 8
 Forced Choice Recognition: 6/9

WECHSLER MEMORY SCALE- FOURTH EDITION (WMS-IV)

| <u>Subtest</u> | <u>Raw Score</u> | <u>Percentile</u> |
|--|------------------|-------------------|
| Logical Memory I - Recall Total Score | 0 | 0.1 |
| Logical Memory II - Recall Total Score | 0 | 0.1 |
| Logical Memory II - Recognition Total Score | 17 | <2 |
| Visual Reproduction I - Recall Total Score | 1 | 0.1 |
| Visual Reproduction II - Recall Total Score | 0 | 0.1 |
| Visual Reproduction II - Recognition Total Score | 0 | <2 |

BECK DEPRESSION INVENTORY - II: Discontinued