

Doctor: Gerardo Fernandez
Evaluator: Matías Shulz
Date: 29 of January 2021

Patient: Jason Garmin
Age: 61

EVALUATION: COLOR TASK – 3 TARGETS

VISUAL SEARCH

Normal value below 35



40

GAZE DURATION

Normal value above 800



643

INTEGRATIVE MEMORY PERFORMANCE

Normal value above 63



28

ASOCIATIVE MEMORY PERFORMANCE

Normal value above 67



70

EXECUTIVE FUNCTIONS

Normal value below 16



15

PARAHIPOCAMPAL REGION PRESERVATION

Normal value above 63



52

For each cognitive function and/or brain area analyzed, the results are indicated by the following color coding:

- No relevant problems were encountered
- Mild impairment, no necessarily pathological
- Severe impairment, and/ or pathological

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COGNITIVE PERFORMANCE AND RELATED BRAIN AREAS

Preserved Cognitive Functions & Brain Areas:

- Visual Search: Basal Ganglia, Superior Colicullus
- Gaze: Lateral Parietal Cortex, Medial Prefrontal Cortex (mPFC), Anterior Superior Temporal Sulcus (aSTS)
- Integrative Memory Functions: Enthorinal Cortex, Perirhinal Cortex
- Associative Memory Performance: Hipocampus
- Executive Functions: Prefrontal Cortex

Mildly Impaired Cognitive Functions & Brain Areas:

- N/A

Severely Impaired and/ or Pathological Cognitive Functions & Brain Areas:

- N/A

Presumptive Diagnosis

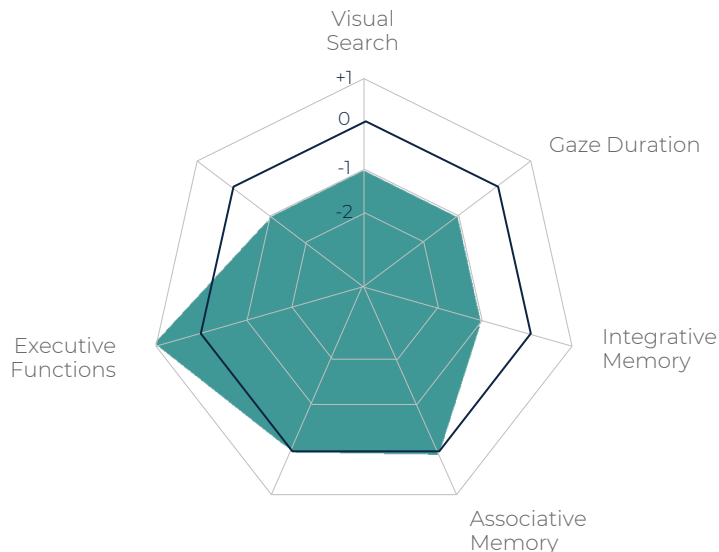
Generalized cognitive and brain alteration. We recommend repeating the Colors Test with 2 targets.

A.I. Performance Index

74%

OVERALL PERFORMANCE

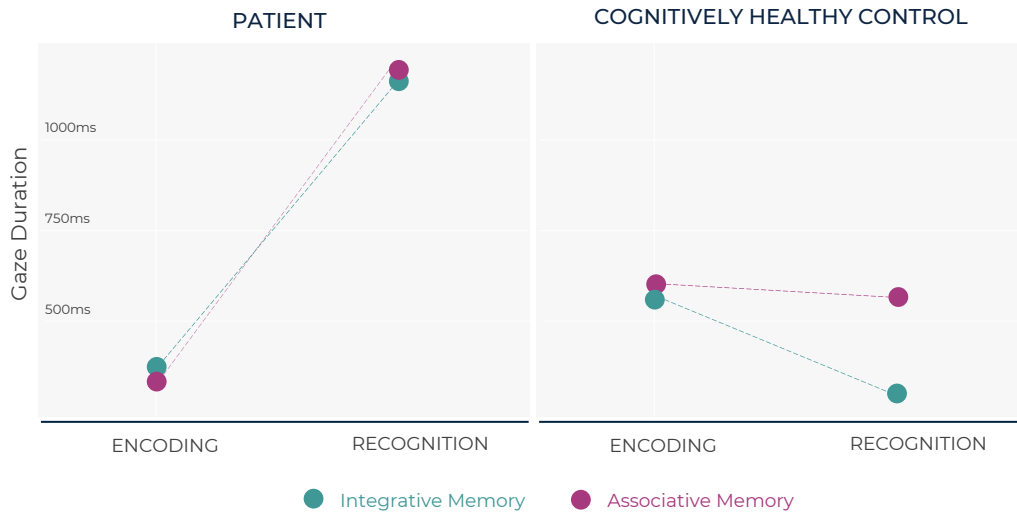
The following graph displays the general cognitive performance of the patient. For more information on how to interpret this graph, please refer to the Annex – Overall Performance Graph Interpretation.



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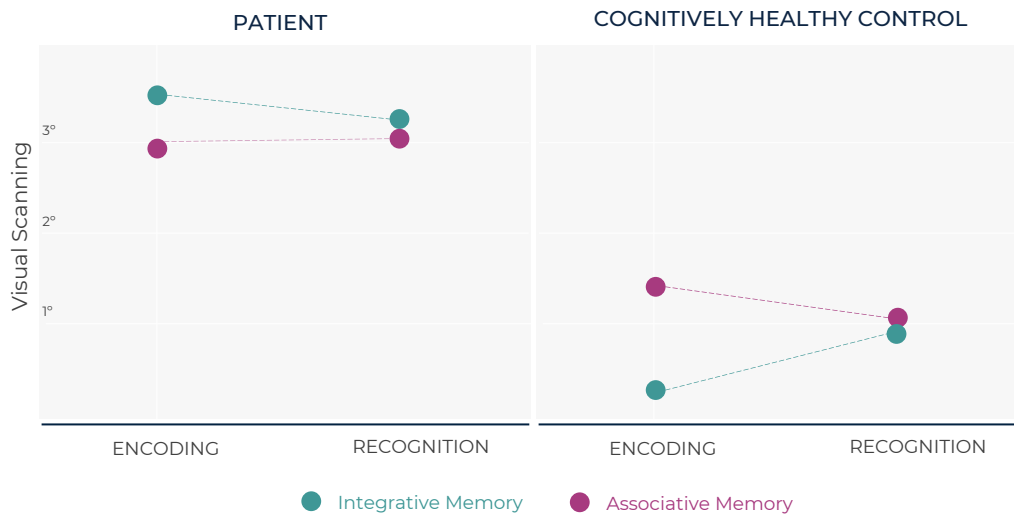
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GAZE DURATION



The Gaze Duration graph displays the average amount of time [ms] needed by the patient to extract information from an image during a trial, in both Encoding and Recognition stages. For more information on how to interpret this graph, please refer to the ANNEX – Gaze Duration Graph Interpretation.

VISUAL SCANNING

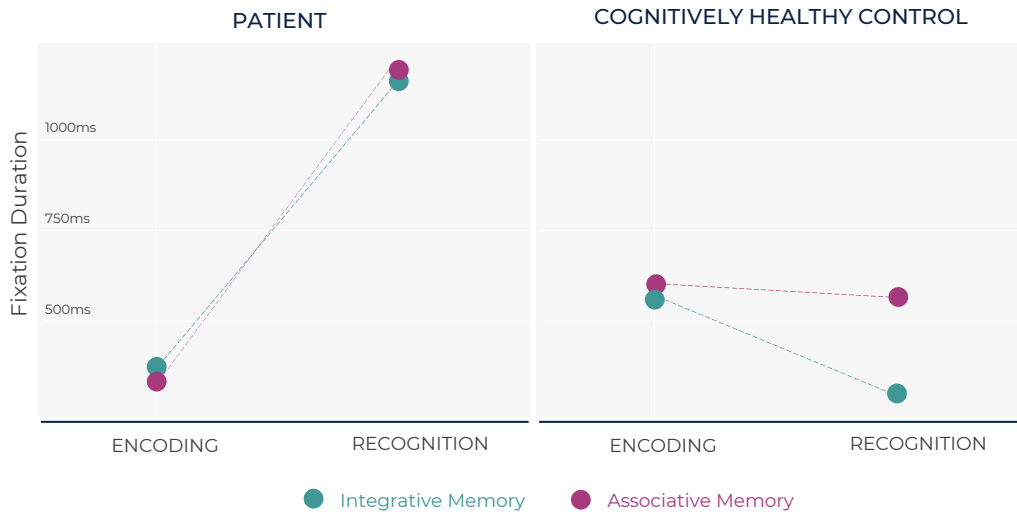


The Visual Scanning graph displays the patient's visual scanning capabilities while looking for targets, in both Encoding and Recognition stages. For more information on how to interpret this graph, please refer to the ANNEX – Visual Scanning Interpretation.

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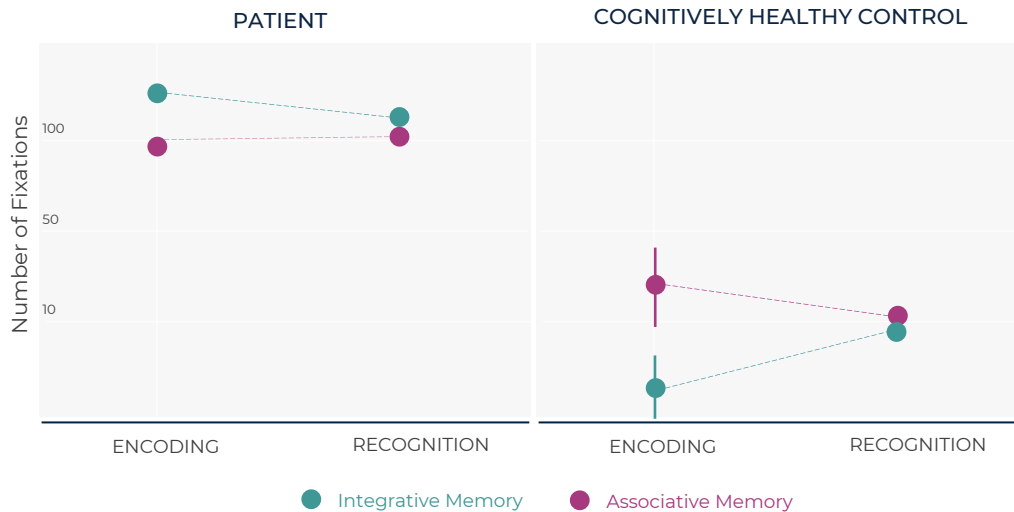
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FIXATION DURATION



The Fixation Duration graph displays the average amount of time [ms] of the fixations performed by the patient, in both Encoding and Recognition stages. For more information on how to interpret this graph, please refer to the ANNEX – Fixation Duration Interpretation.

NUMBER OF FIXATIONS



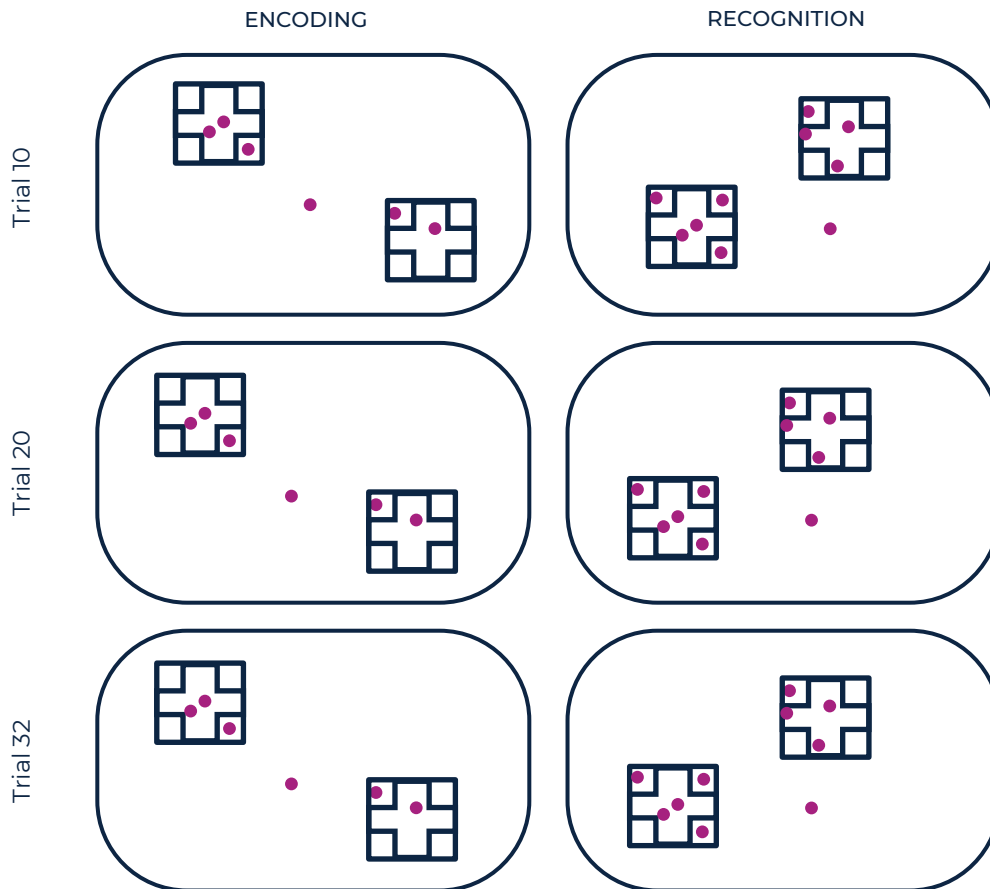
The Number of Fixations graph displays the number of fixations performed by the patient, in both Encoding and Recognition stages. For more information on how to interpret this graph, please refer to the ANNEX – Number of Fixations Interpretation.

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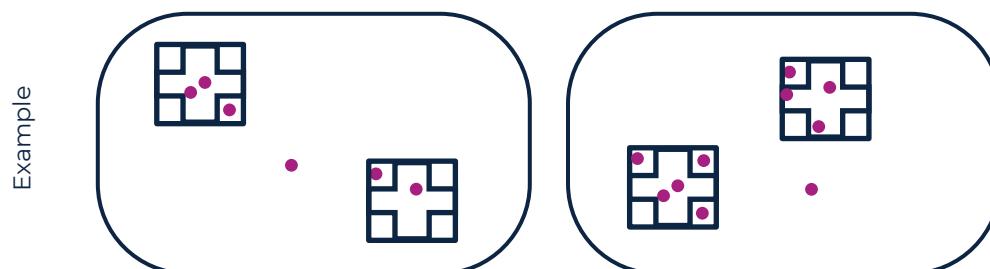
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FIXATION PLOTTING

The Fixations Plotting Chart displays the fixations performed by the patient, during the the trials 10, 20 and 31 of the Encoding (left) and Recognition (Right) stages, in the Color Combination Test.



COGNITIVELY HEALTHY CONTROL FIXATIONS PLOTTING



The Cognitively Healthy Control Fixations Plotting chart displays the fixations performed by a Cognitively Healthy person, during the Encoding (left) and Recognition (Right) stages, in the Color Combination Test.

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LEGAL DISCLOSURE

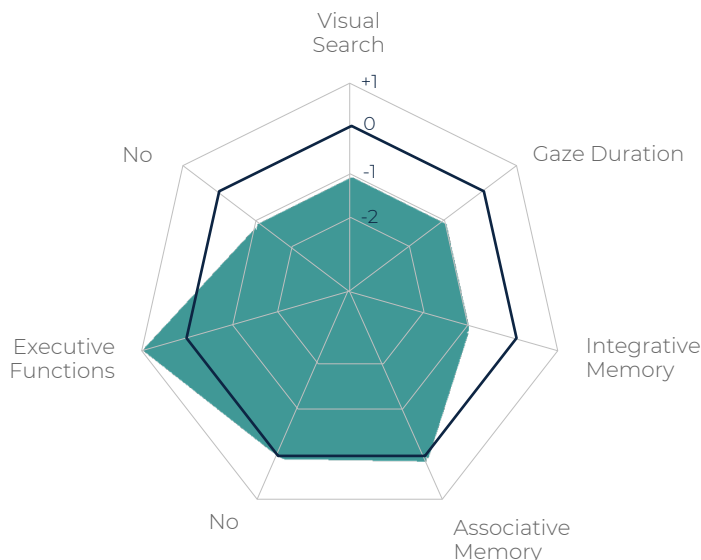
The results obtained in this report are not sufficient to define a diagnostic

VARIABLE DEFINITIONS

- Visual Search: Visual scanning while looking for targets (Rayner, 1998) [degrees]
- Gaze Duration: Time to extract the available information of a trial (Fernández et al., 2018) [milliseconds]
- Integrative Memory Performance: Capacity of identifying the combination of colors between targets. Visual Short Term Integrative Memory supports the temporary retention of conjunctions of features within object representations, a function needed for the formation of new identity (Parra et al., 2015). [n]
- Associative Memory Performance: Capacity of identifying new colors within the targets. Visual Short Term Associative Memory enables a flexible representation of the relations between the stimulus' parts, each holding its own identity and retaining its individual access (Mayes et al., 2007). [n]
- Executive Functions: Number of ocular fixations required for successfully completing a trial (Rayner, 1998). [n]
- Parahipocampal Region Preservation: Index measuring the preservation of the brain region necessary for integrating objects in the Visual Short Term Integrative Memory, particularly altered in patients with Alzheimer's Disease, namely Entorhinal and Perirhinal cortex (Fernández et al., 2018). [%]

OVERALL PERFORMANCE GRAPH INTERPRETATION

The Overall Performance Graph displays the general cognitive performance of the patient. The darker inner line marked with the number zero, represents the average value obtained for cognitively healthy patients (the "Average"). The inner lines marked with the numbers -1 and -2, represent 1 or 2 standard deviations below the Average. The outer line marked with the number +1, represents a performance 1 standard deviation or more, above the Average. The center of the graph represents 3 standard deviations or more, below the Average. The area colored in green, represents the patients results.



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ANNEX

GRAPHICS

The Gaze Duration graph displays the average amount of time [ms] needed by the patient to extract information from an image during a trial, in both Encoding and Recognition stages. The left side of the graph, displays the patient's results, while the right side of the graph displays the average of Cognitively Healthy Controls. Each color represents either the results coming from the Color Combination (Integrative Memory) Test or the New Colors Test (Associative Memory)

Gráficos

The Gaze Duration Graph displays patient's needed time to extract the whole picture of a trial
El gráfico Duración de la Mirada, muestra el tiempo que necesitó el paciente para extraer la información de la imagen durante un trial.

Gaze Duration: Time to extract the available information of a trial [milliseconds] Fernández et al., 2018)

Integrative Memory Performance: Capacity of identifying the combination of colors between targets [n]

Associative Memory Performance: Capacity of identifying new colors within the targets [n]

Executive Functions: Number of ocular fixations required for successfully completing a trial [n] (Rayner, 1998)