



Qualitative Brain Volume Assessment In MCI: Linking Structural Changes To Mild Cognitive Impairment

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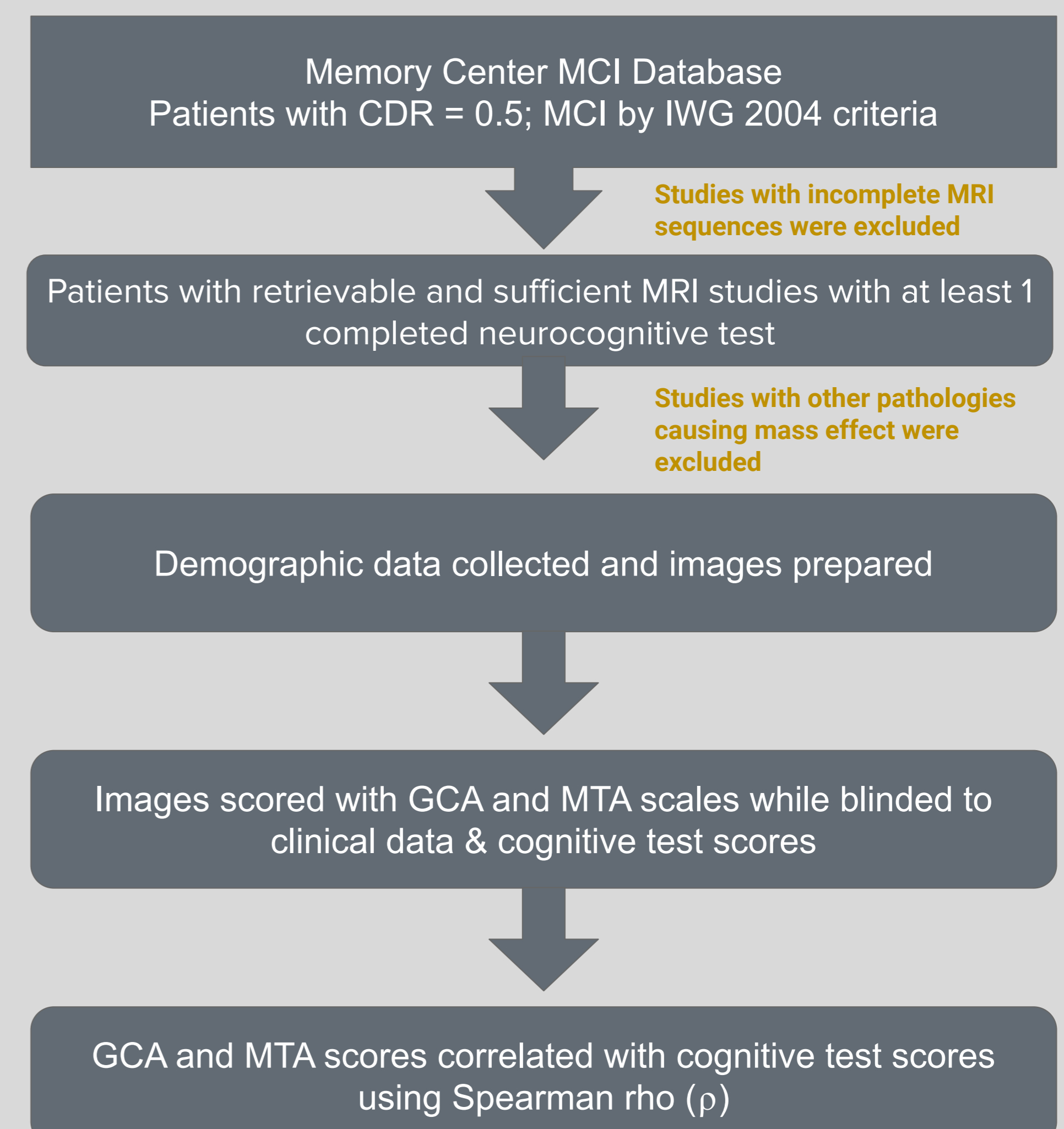
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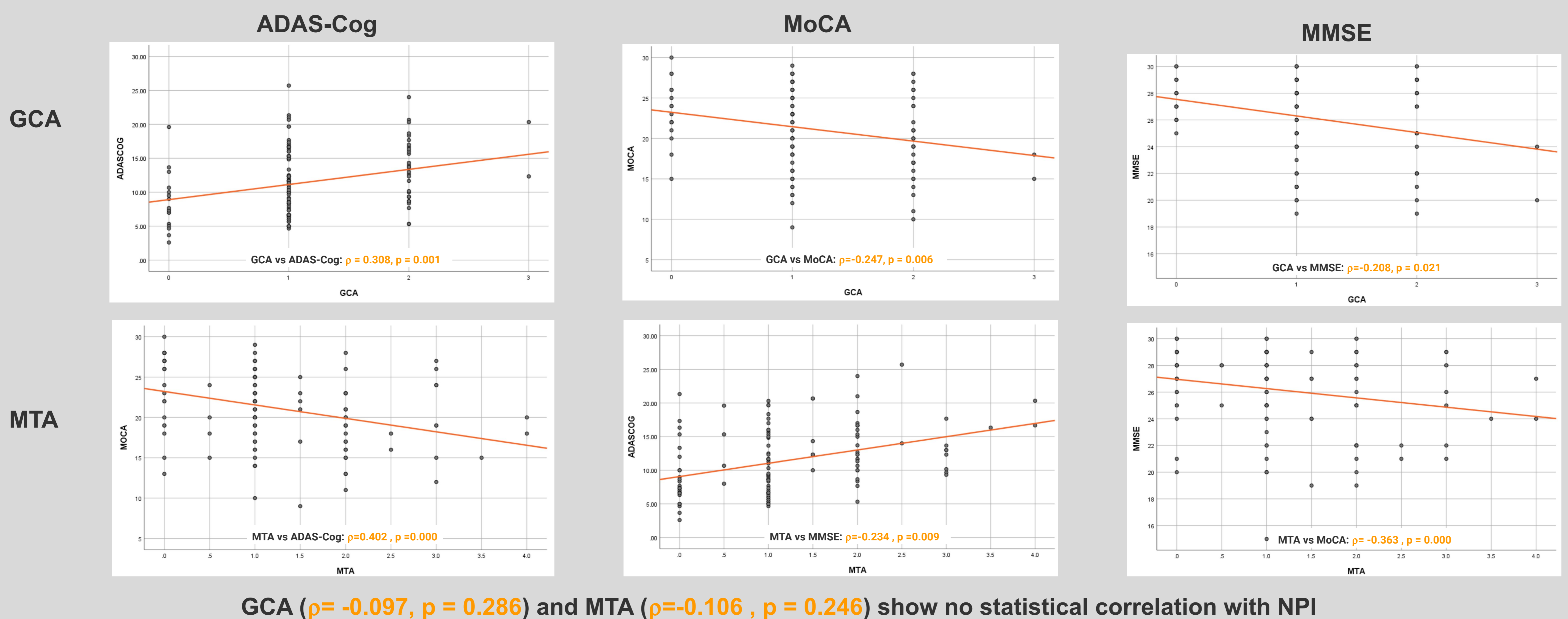
BACKGROUND

- Mild cognitive Impairment (MCI): significant stage of cognitive decline that occurs before dementia and is characterized by independent functioning despite memory or cognitive impairments
- Identifying MCI is crucial for early detection
- General Objective: To evaluate the structural changes/atrophy patterns in patients with mild cognitive impairment (MCI)
- Specific Objectives:
 - To detect structural brain changes/atrophy patterns in MCI using readily available visual rating scales for qualitative brain volume assessment
 - To determine the correlation between structural brain changes/atrophy patterns with symptom severity in patients diagnosed with MCI

METHODOLOGY



RESULTS



DISCUSSION

- 1 Similar to other Asian populations (Liu et al, 2022), MCI in our setting appears to be more prevalent in women than men
- 2 Our results imply that ADAS-Cog is robust enough to detect MCI in our setting
- 3 GCA and MTA tend to vary with ADAS-Cog, and MoCA and MMSE to a weaker degree, implying that cognitive scores above the predetermined cut-off values increase the possibility of detecting brain structural changes
- 4 Lack of statistical correlation between NPI and GCA and MTA, may be due to the inherent heterogeneity of the NPI which covers a wide range of domains, including depression, delusions, aberrant motor disturbances, and sleep/appetite changes, which have no proven and/or discrete anatomic association/s, and 2) the recall bias introduced by the caregiver-as- informant nature of the questionnaire

CONCLUSION

- 1 In our database, more women are affected with MCI than men, though men have significantly higher GCA and MTA scores at the time of diagnosis
- 2 ADAS-Cog scores greater than cut-off for MCI, implies the need for initial imaging
- 3 GCA and MTA scales are useful in detecting structural changes in MCI patients
- 4 Significant correlation between structural changes detected using GCA and MTA scales with cognitive tests underscores the role of structural imaging in these patients
- 5 Detection of these structural changes should prompt closer surveillance