# **Prediction and classification of Alzheimer disease based on quantification of MRI deformation**

**Problem Statement:**

People with Alzheimer's disease first develop subtle memory loss and personality changes that differs from normal age-related memory problems. They seem to tire or become upset or anxious more easily. They do not cope well with change. For example, they can follow familiar routes but traveling to a new place confuses them and they can easily become lost. In the early stages of the illness, people with Alzheimer's disease are particularly susceptible to depression.

As the disease progresses, memory loss worsens and decision making becomes more difficult. A person with Alzheimer’s can become angry when family members try to help. Eventually, social life becomes more difficult, people may not recognize long-time friends or family members, and may become more isolated. In late stages of Alzheimer's people begin to lose physical coordination and may need help with daily functions and taking care of themselves. A person may notice changes in themselves, or changes may first be observed by family members or friends.

Diagnosis of Alzheimer’s typically involves physical and neurological exams, a thorough medical history and mental status evaluation. It may involve brain imaging (such as MRI or CT) which could identify other causes of problems such as stroke, tumor or head trauma.

**Motivation:**

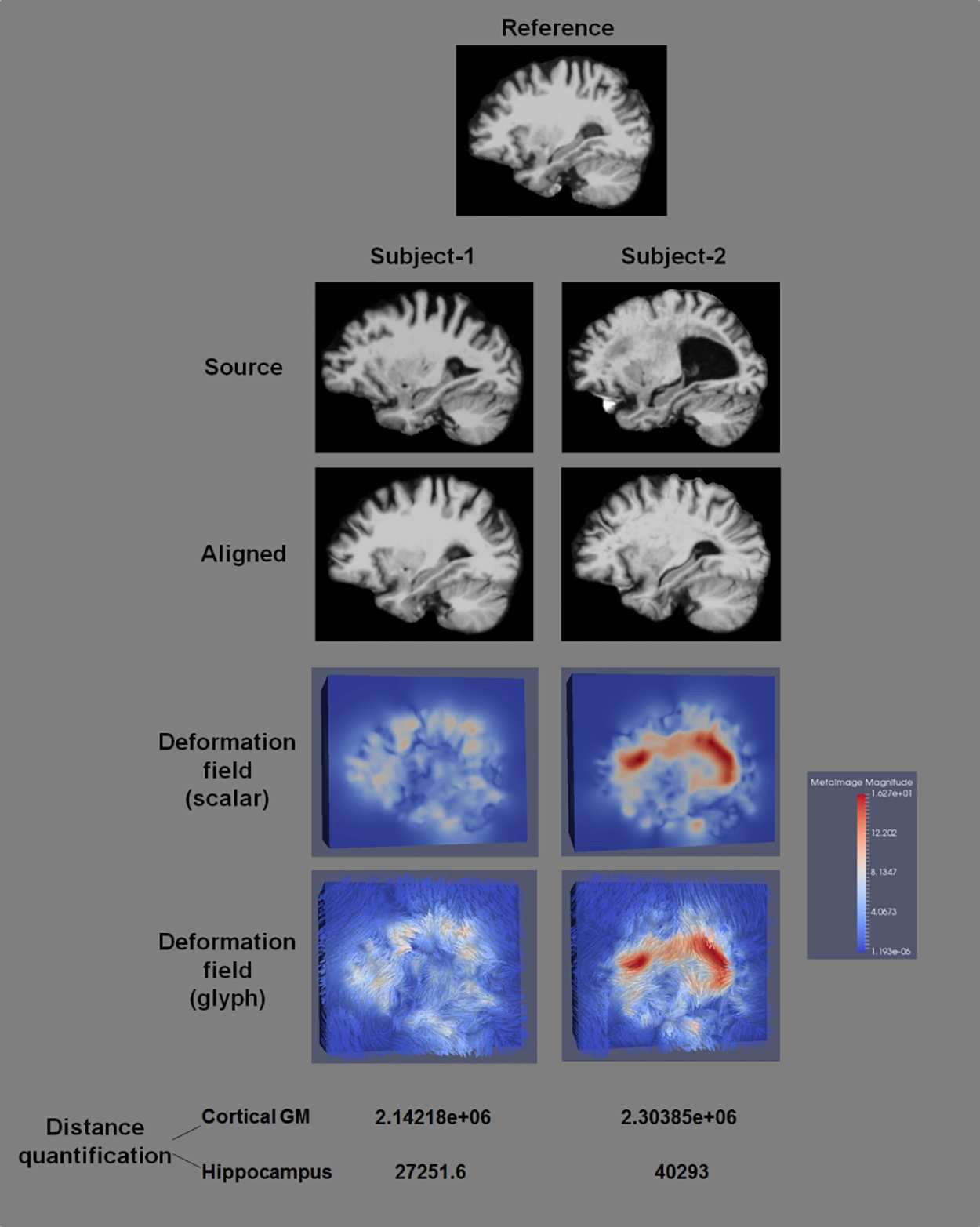
* Recognition of Instrumental Activities of Daily Living (IADL) of patients suffering from Alzheimer DiseaseDecline in IADL is correlated with future dementia

IADL analysis:

Survey for the patient and relatives *--7* subjective answers

* + Observations of IADL with the help of **video cameras** worn by the patient at home .Objective observations of the evolution of disease

**Architechure:**



**References**

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