



# CADDementia

A challenge on computer-aided diagnosis

Join our Challenge on Computer-Aided Diagnosis of Dementia based on structural MRI data!

Classification methods for dementia have demonstrated high performances, but are not yet used in clinical practice. A major reason for this is that these methods are not well enough validated for clinical use.

In this challenge, we aim to take a step forward to the clinical use of computer-aided diagnosis methods for dementia by performing a large-scale objective validation. To compare the performance of image-based diagnosis methods, **all researchers are invited to participate with their algorithms.**

## Important dates

**1 March 2014:** The data is available for download

**8 June 2014:** Deadline for classification outcomes and the workshop paper

**14-18 September 2014:**  
MICCAI

## How does it work?

We provide a test set of multicenter clinical-representative T1-weighted MRI data of patients with Alzheimer's disease (AD), mild cognitive impairment (MCI) and healthy controls. The diagnosis methods can be trained and tuned on any suitable data (i.e. from the ADNI database). Additionally, we provide a small set of training data with diagnostic labels. Each submission will be evaluated against the reference standard (clinical diagnosis). For discussing the participating algorithms and making the results public, we will organize a workshop at MICCAI 2014.

## Motivation

This challenge is designed to address comparability, generalizability, and clinical applicability:

- **Standardized evaluation framework:** the use of the same data set and evaluation methods enables better and more objective comparison of the diagnosis methods.
- **Previously unseen multicenter data:** the ground truth diagnoses are blinded to the participants to avoid overtraining and to promote generalizability of the methods.
- **Multi-class classification of AD, MCI and controls:** according to the current clinical standards, a multi-class diagnosis is required.

For more information, please visit:

<http://caddementia.bigr.nl>

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