



# Update of China-ADNI

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**CHINA-ADNI**

# Outline

- General situation of China-ADNI
- Enrolled sites and subjects
- Progress of the main cores



**ADI-China**

**Scientist advisory board**

**Administration committee**  
PI: Prof. Kuncheng Li, CMU  
CO-PI: Prof. Jun Wang, BJU  
CO-PI: Prof. Hongzheng Wang, BUMC

**Clinical core**  
Xiaoting Guan

**MRI core**  
Kuncheng Li

**PET core**  
Fang Li

**Pathology core**  
Cuidi Wang

**Biomarker and Genetics Core**  
Jun Wang/Yan Zhang

**Biostatistics and Informatics core**  
Li Wang

**DATA Post process**  
Yong Fang

# China-ADNI research plan

*800–1000 subjects (80 sites)*

<i>Normal</i>	<i>Early MCI</i>	<i>Late MCI</i>	<i>Mild AD</i>
<i>200–250</i>	<i>200–250</i>	<i>200–250</i>	<i>200–250</i>



# Main Parameters of Study

- Neuropsychological Tests
- Biomarkers:
  - in Blood: Apo E polymorphism, amyloid40/42, tau
  - in CSF: Amyloid 40/42, tau
- MRI
- PET: FDG-PET, F18-AV45-PET

- 3 sites from other provinces joined to the cooperation study (Total 10 sites)
- 16 new subjects have enrolled in the research since Jul 2012



# Neuropsychological Assessment

- Screen: MMSE, LM-I, LM-II, GDS, CDR
- Baseline: MoCA, BNT, Rey AVLT(30' Delay), NPI, FAQ
- 6 month later: MMSE, CDR, MoCA, BNT, Rey AVLT(30' Delay), NPI, FAQ
- 12 month later: MMSE, LM-I, LM-II, GDS, CDR, MoCA, BNT, Rey AVLT(30' Delay), NPI, FAQ

# Preliminary clinical data

➤ New subjects enrolled: 16

Controls = 6

EMCI = 4

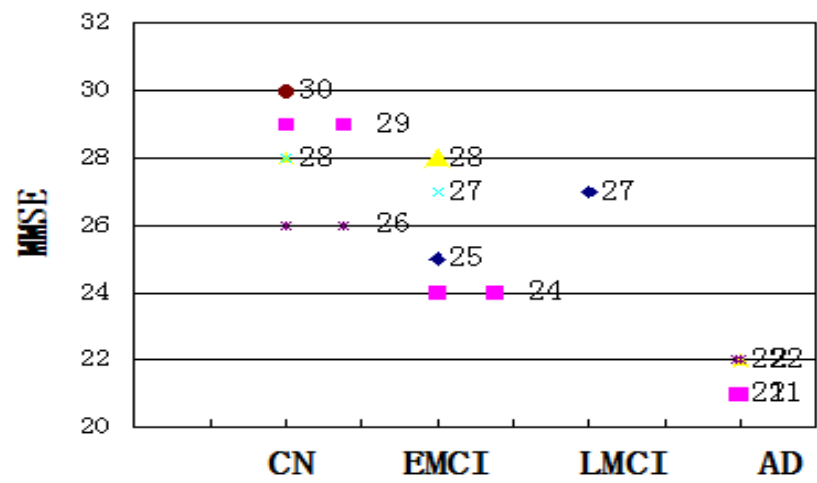
LMCI = 1

AD = 5

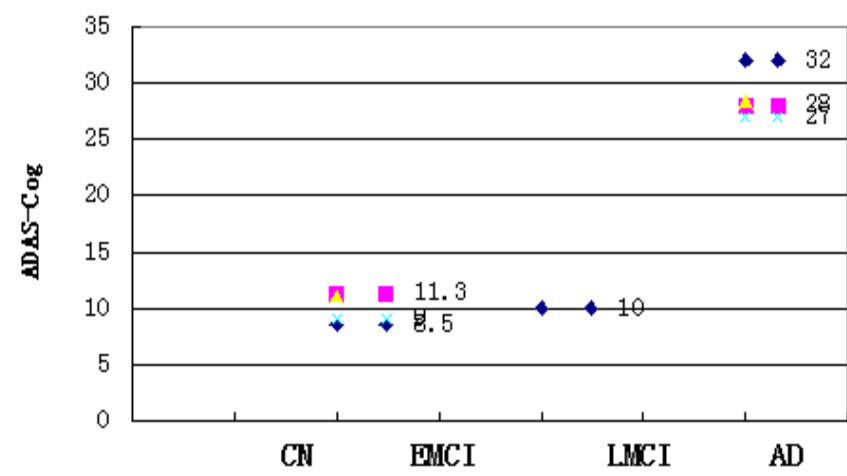




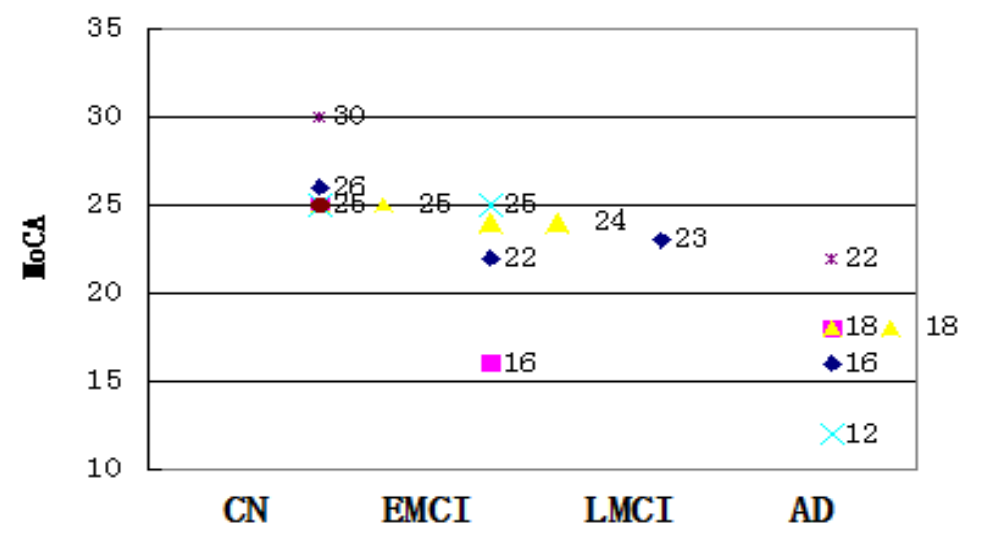
### MMSE Baseline Data



### ADAS-Cog Baseline Data



### MoCA Baseline Data



# Preliminary biomarker study

	ApoE	A $\beta$ 1-42(pg/ml)	total tau (pg/ml)	p-tau (pg/ml)
No.1	II/III	65	201	32
No.2	III/III	30	36	0
No.3	II/III	49	54	0.05
No.4	III/III	35	190	11
No.5	II/II	36	58	3
No.6	II/III	47	74	6
No.7	III/III	81	81	2
No.8	III/III	48	69	15
No.9	II/III	39	57	0
No.10	III/III	62	49	0.9

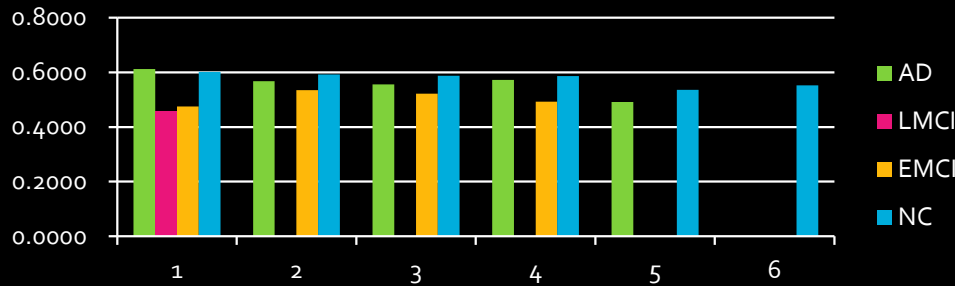
# Preliminary MRI Study

- Establish standard protocol for MRI acquisition
- Develop and implement methods for quality control of MRI
- Improve the post-processing methods
- 16 cases were performed with baseline 3T MRI scan, and 11 cases underwent the 3 and 6 months follow-up scan

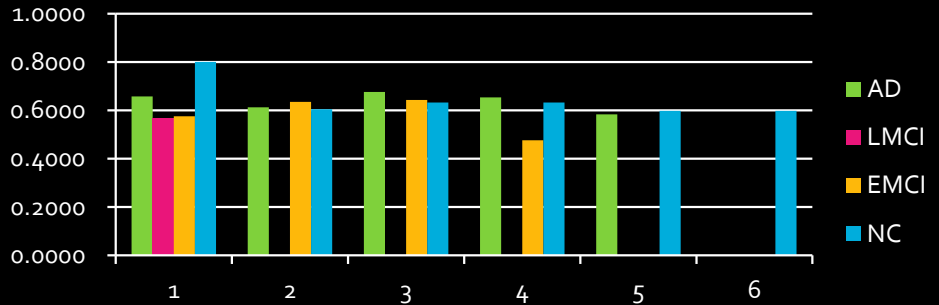


- 3D T1 volume (Voxel-based morphometry, Cortical thickness)
- Diffusion tensor imaging / Tractography (Tract-specific analysis, Tract-based spatial statistics)
- Resting state fMRI (Functional connectivity, Effective connectivity, Graph theory)
- Magnetic resonance spectroscopy
- Susceptibility weighted imaging

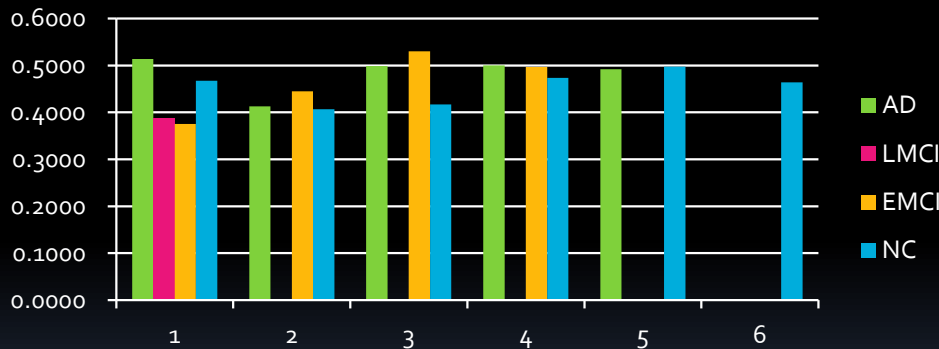




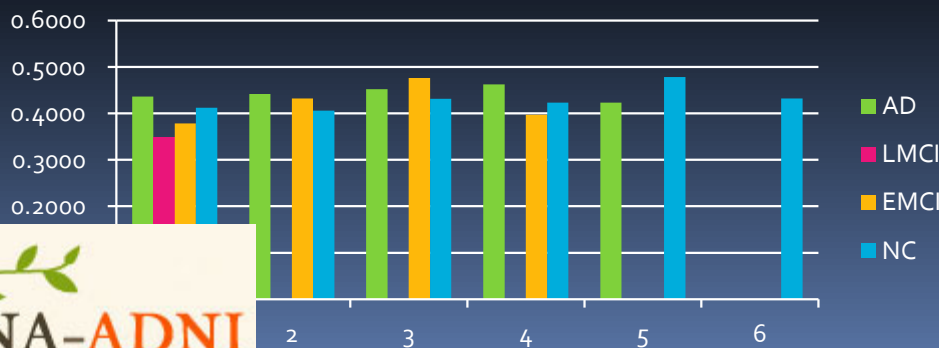
Cingulum, FA value



Corpus callosum, FA value



Fusiform gyrus, FA value



MPFC, FA value

# Preliminary PET Study

- Imaging quality control with phantom
- Examination protocol was achieved according to the WW-ADNI
- 13 cases had undergone the baseline FDG-PET
- No AV-45-PET examination were performed until now

➤ **Many thanks to the  
support from WW-ADNI**

