



1

The 2nd MCI symposium, Kyoto, Oct.6th, 2023

Differential risk of AD in subjects with MCI

Bin Zhou, MD,PhD

Learning Health Society Institute



Background

2



- Two anti-AD antibody drugs have been approved. Another one is pending approval. One indication is Abeta positive MCI
- The risk of AD in Abeta elevated MCI is different. Who will develop AD in the Abeta positive individuals?
- In Shanghai MCI cohort study we used cognition and MRI findings to find the higher and lower AD risk group. A limitation of the study is the lack of Abeta information.
- Now we used the ADNI data that has Abeta information to do a validation.

The conversion rate in MCI with elevated or normal PET beta amyloid—32mon. Follow-up

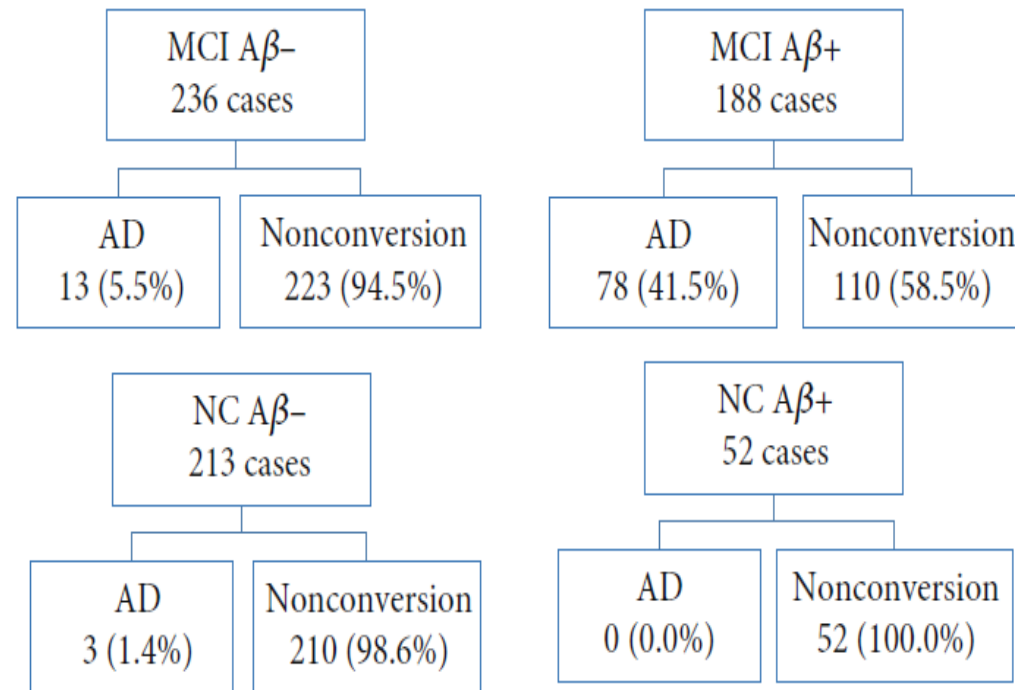


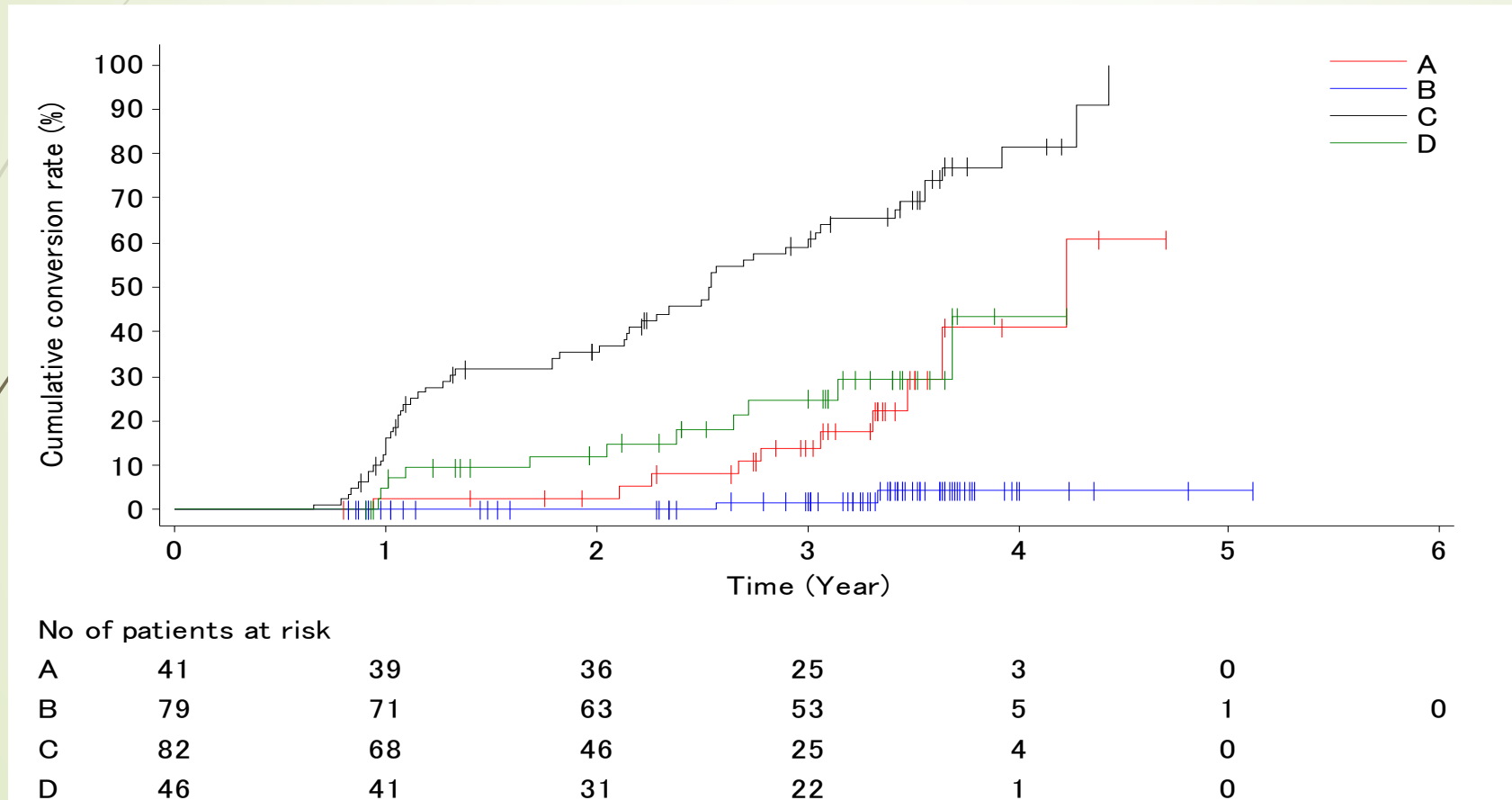
FIGURE 1: Outcomes of MCI and NC subjects based on PET brain Abeta. AD: Alzheimer’s disease; NC: normal cognition; MCI: mild cognitive impairment; Aβ- and Aβ+: brain PET imaging Abeta negative and Abeta positive, respectively.

Risk classification by combination of ADAS, and MRI findings—Shanghai MCI cohort study

4



group		Hippocampus Volume Right (cm ³)	
		<3.651	3.651<=
Total ADAS-RC (13)	<20.0	A	B
	20.0<=	C	D



Oct.6th, 2023

Zhou B. et al. Curr Alzheimer Res. 2023;in press-

The validation of Shanghai MCI cohort study using ADNI data

- Subjects: Subjects with mild cognitive impairment and sub-cohort MCI with elevated PET beta amyloid
- Data—from ADNI, download by April 2019.
 - ◆ Neuropsychological test---ADAS13
 - ◆ Structural MRI findings----Hippocampus volume
 - ◆ PET beta amyloid (Florbetapir (18F) uptake value ratio (SUVR) >1.11 was considered elevated.
 - ◆ Gene ApoE4, others...
- Biostatistics
 - ◆ A new index CoVol