

Detection of preclinical Alzheimer's disease for the preemptive therapy

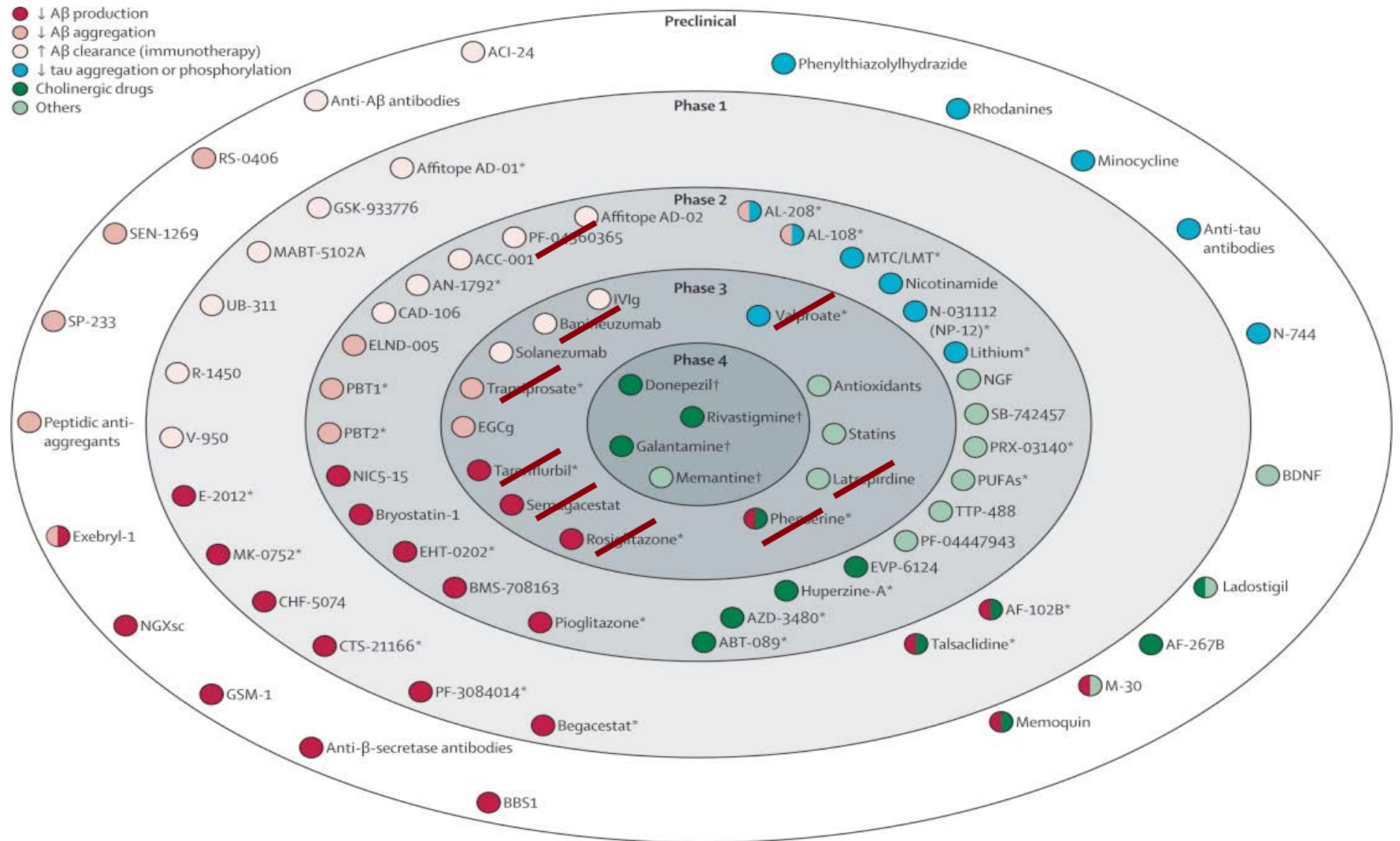


National Center for Geriatrics and Gerontology
Center for Development of Advanced Medicine for Dementia
Katsuhiko Yanagisawa

Stop Alzheimer Disease Before It Starts !



Greg Miller, Science 337, 790-792, 2012



A tangled web of targets

Drugs in development for Alzheimer's disease take aim at a variety of neural mechanisms. But despite a wealth of possibilities, there have been few successes.

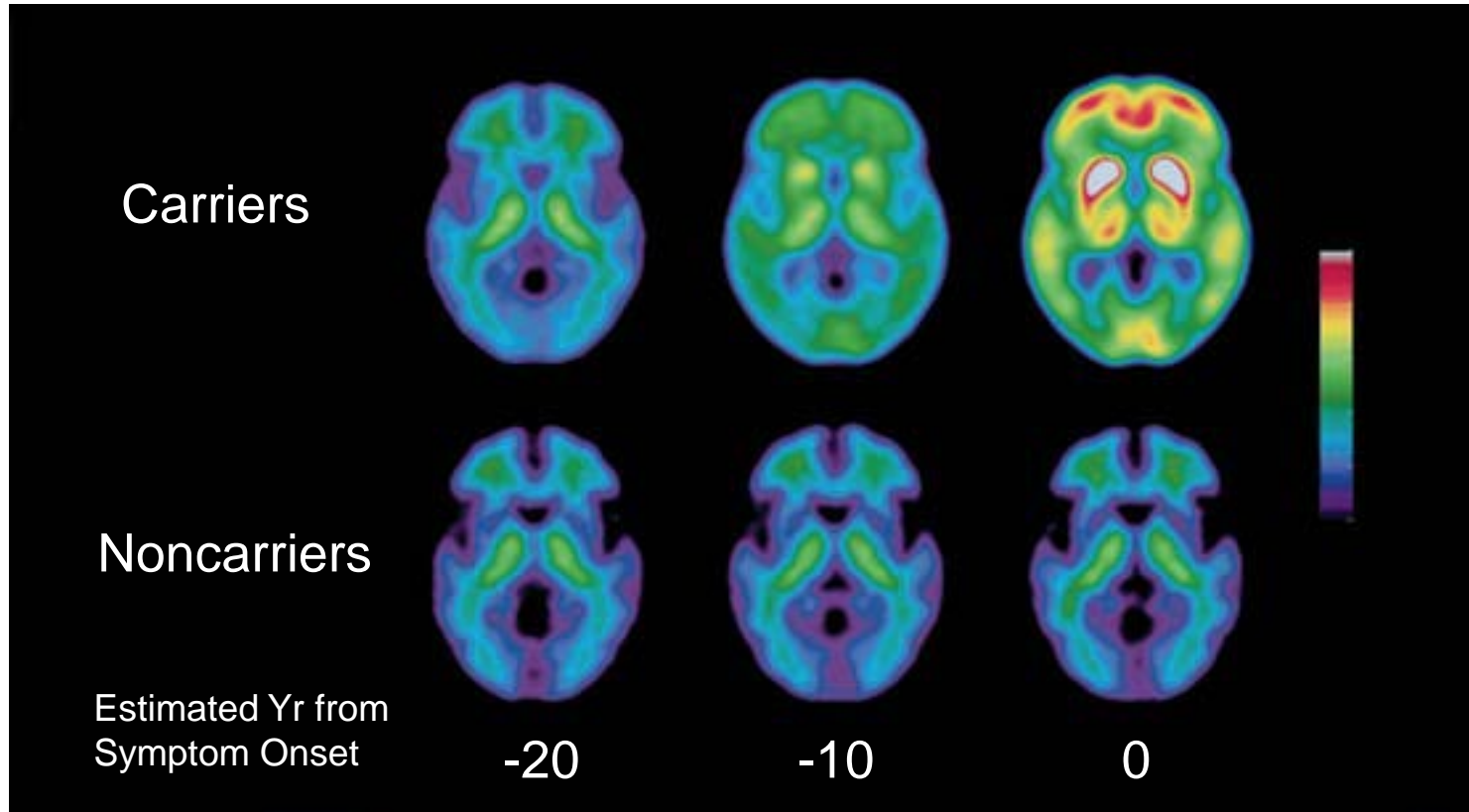
Lauren Gravitz

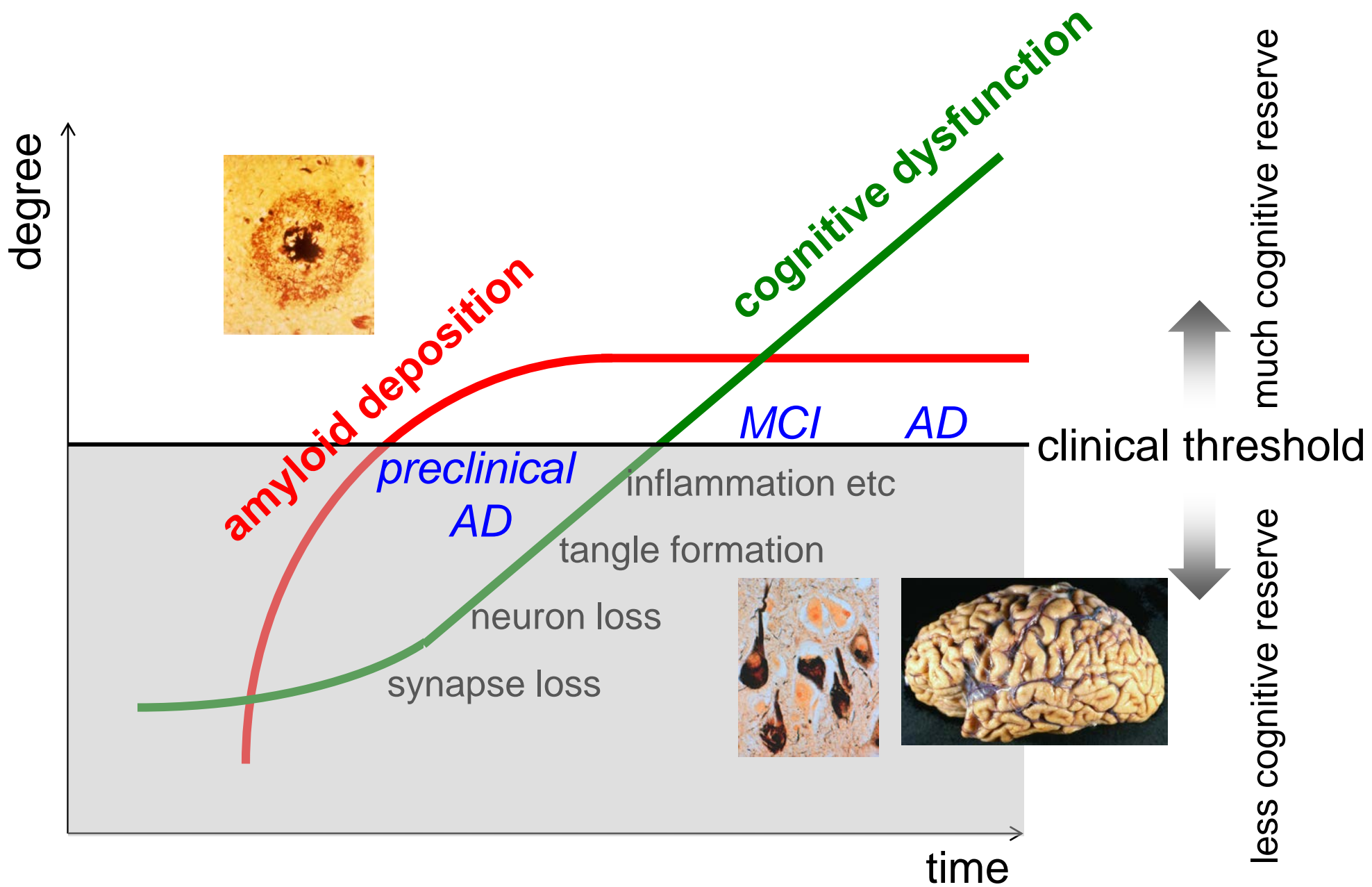


too late for therapeutic intervention

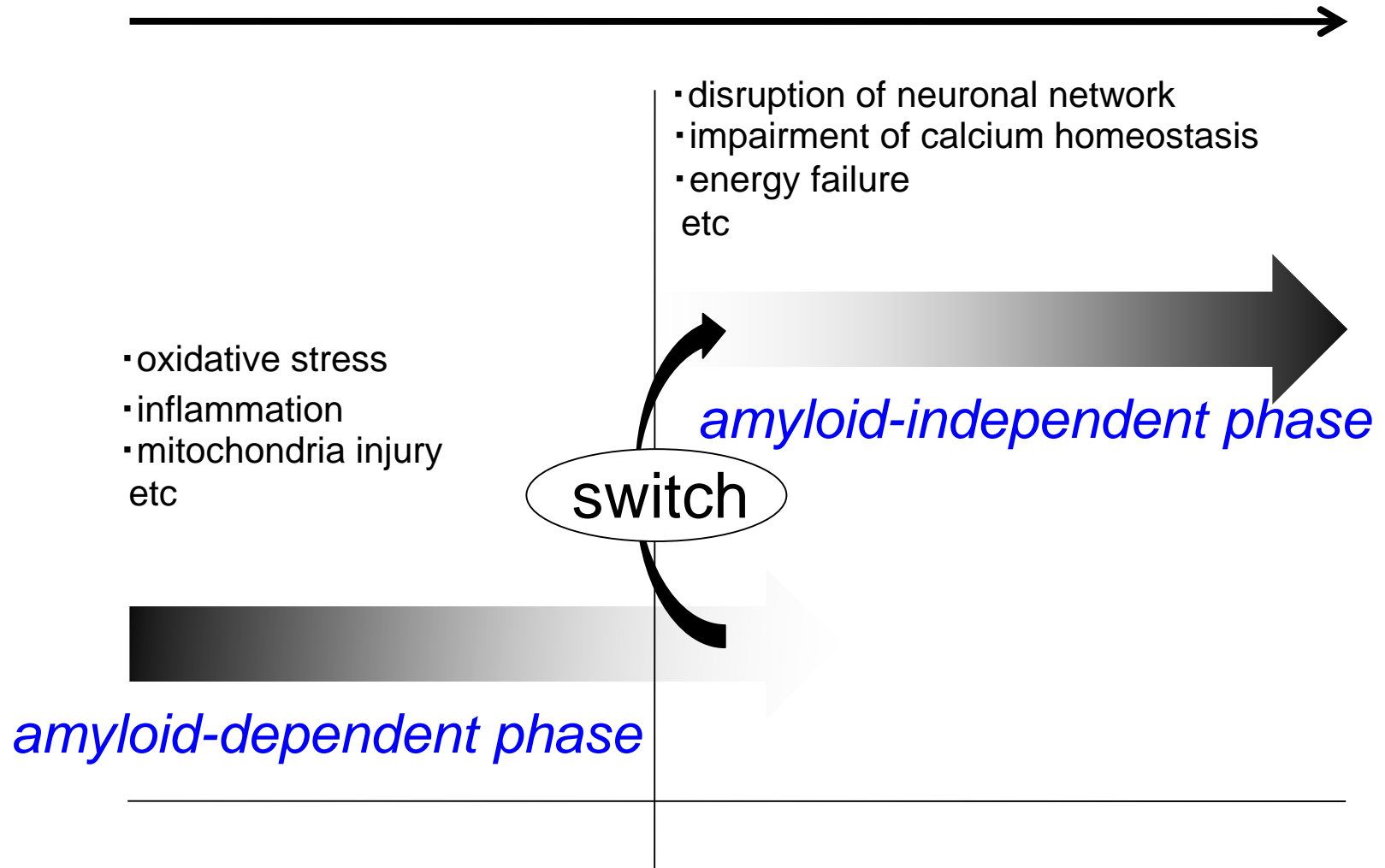
PiB-amyloid imaging on PET

- Study on familial Alzheimer disease -



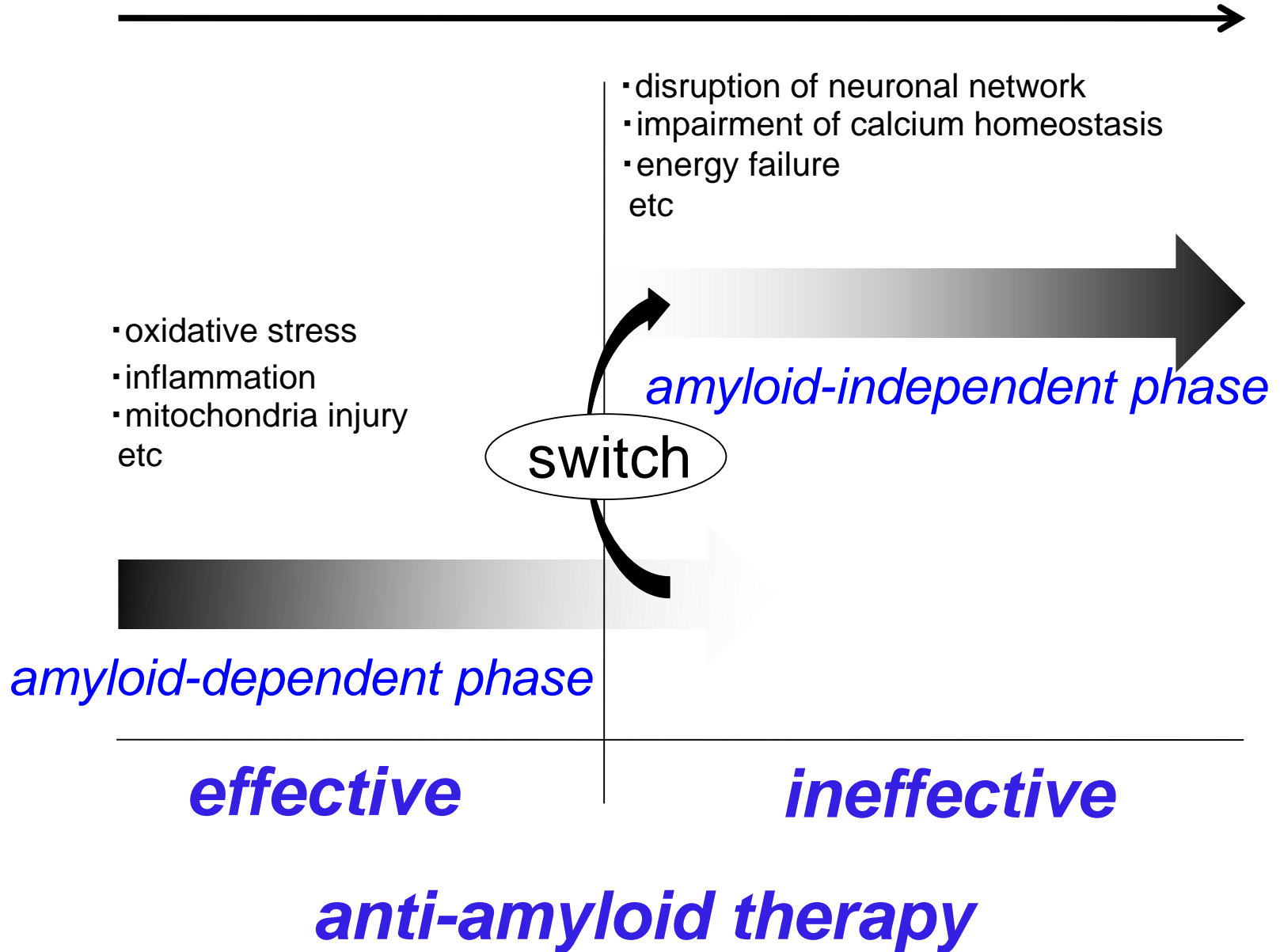


Alzheimer Disease

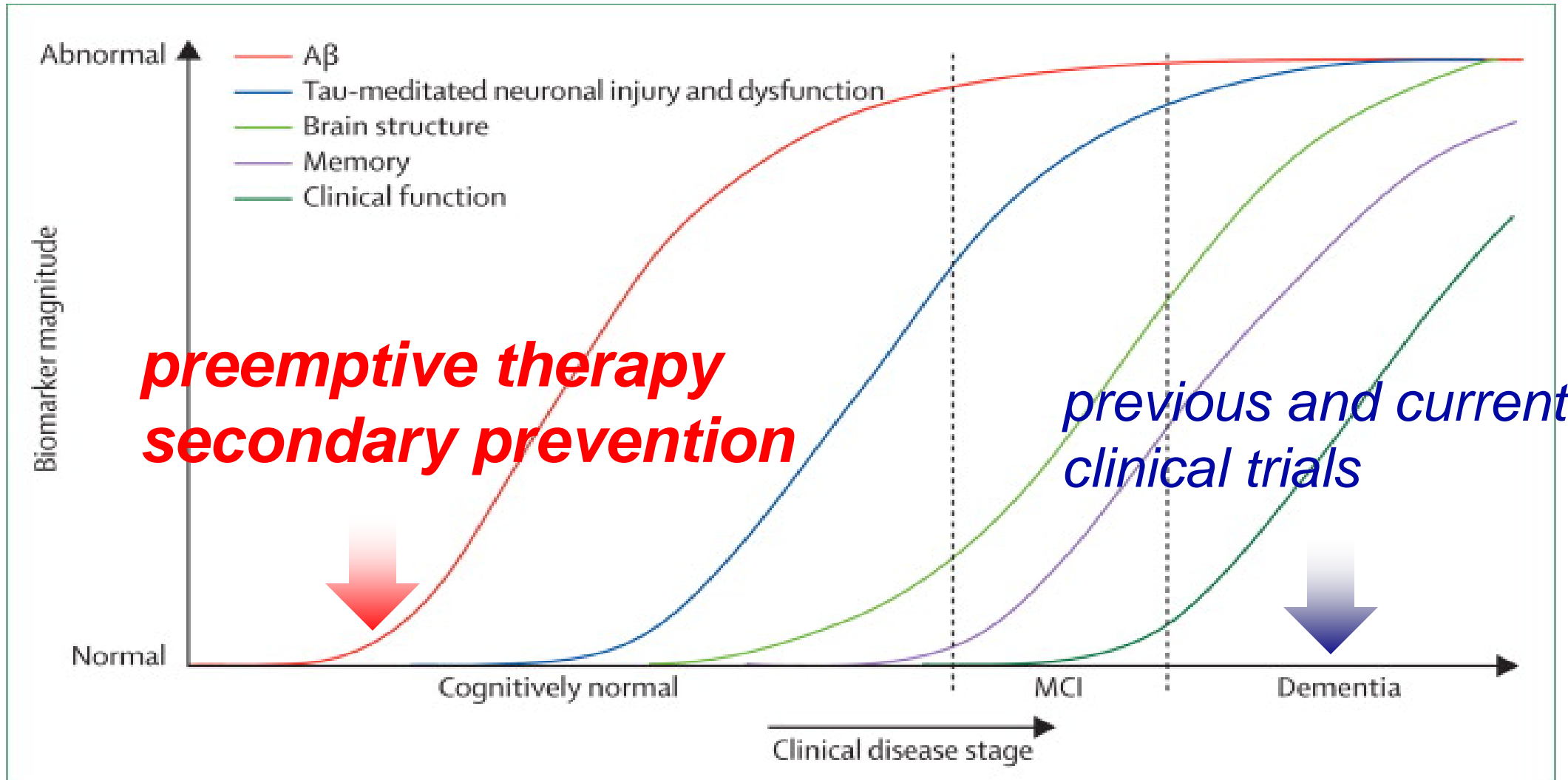


modified from Yanagisawa. Igaku-no-Ayumi 239: 379-382, 2011

Alzheimer Disease



Pathological stage of Alzheimer Disease

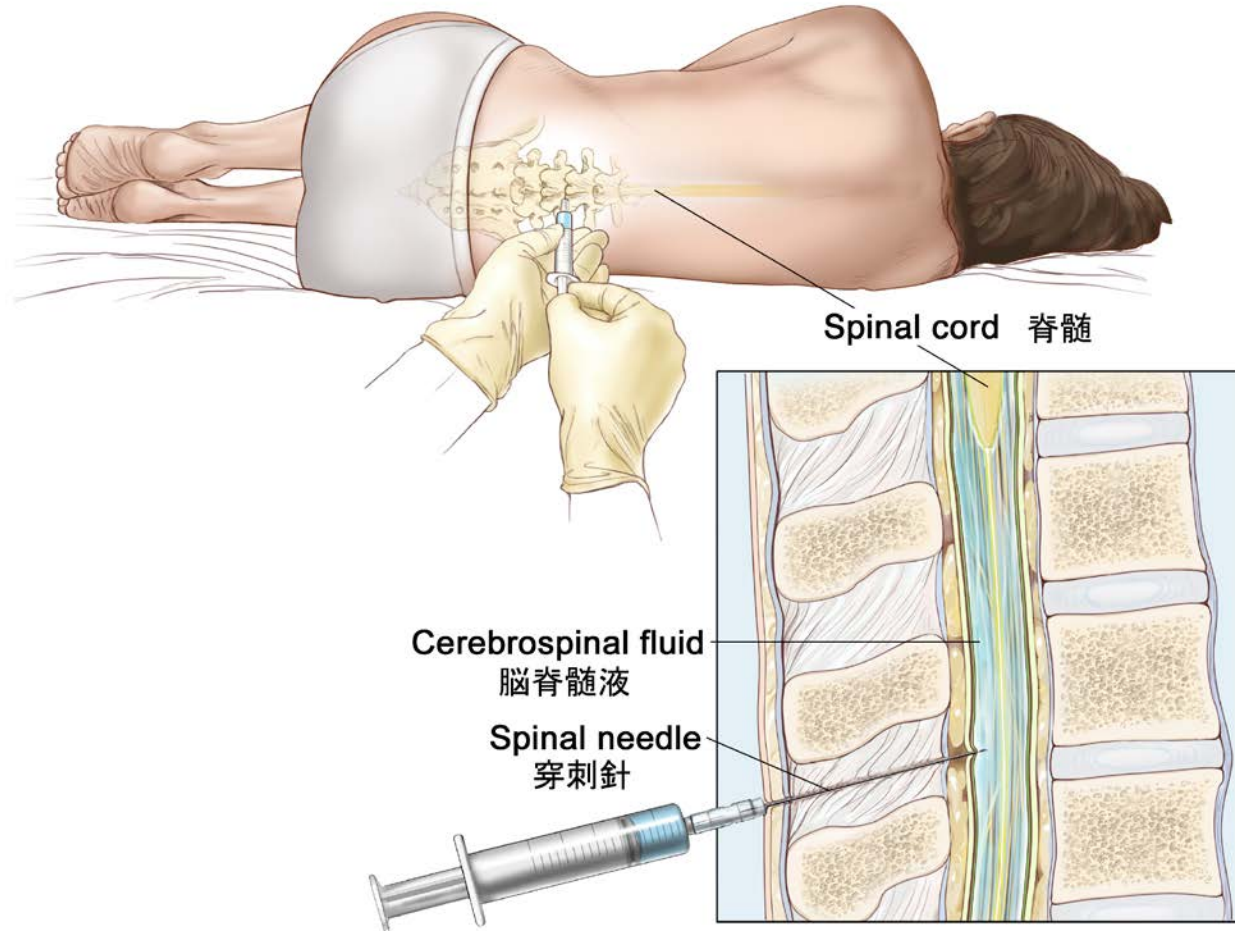




Alzheimer Disease

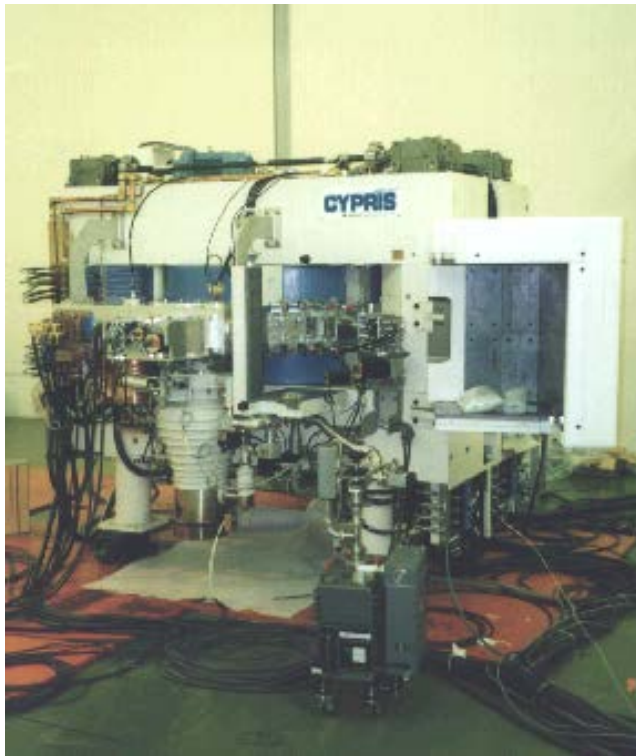
*How should you know the pathological change
before clinical onset?*

Cerebrospinal fluid examination

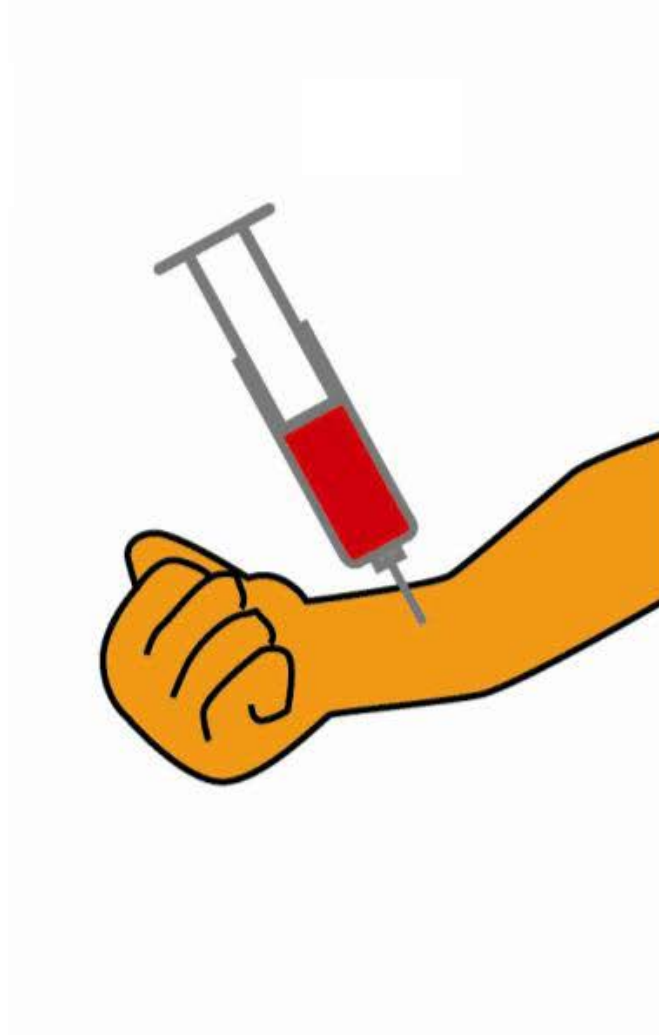


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Amyloid imaging on PET



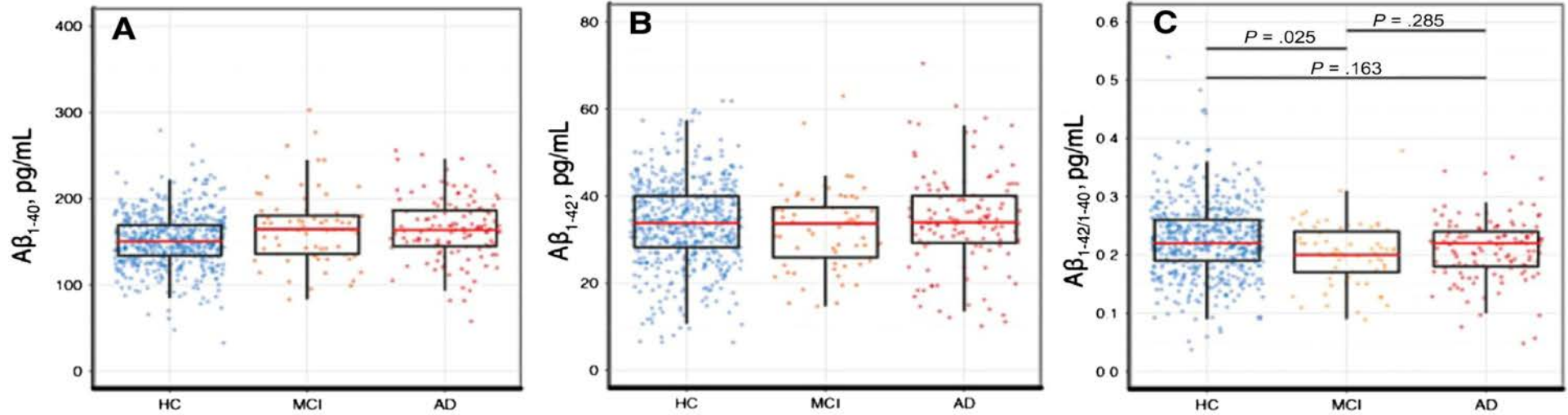
Plasma!



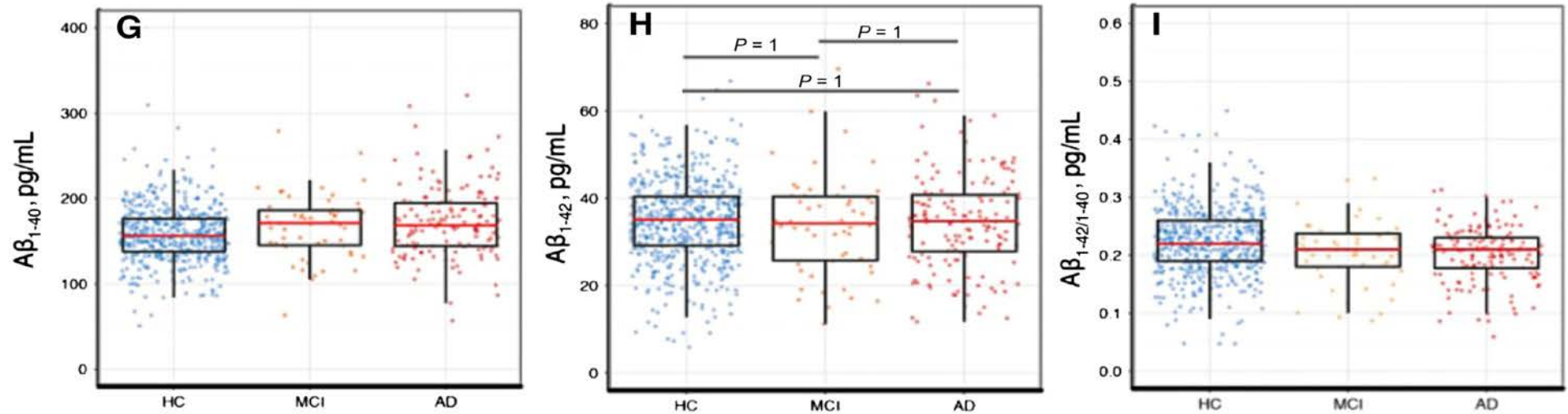
obtained from Yahoo Japan

Plasma amyloid β -proteins

Baseline



18-months later



Novel procedure to detect A β from plasma using mass spectrometry

Kaneko et al., Proc. Jpn. Acad. Ser. B,
104-117, 2014

