

## ***CWPT (Color Words Pick-out Test) to be able to be used for screening before MCI***

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### ***Abstract***

In recent years, pharmacotherapy for dementia has failed, and the target of research has shifted to MCI and PCSD. Along with that, CWPT which has been developed as a neuropsychological test for MCI and PCSD but has not been noticed until now, has come into the spotlight. The reason is that CWPT detects minor declines in brain function prior to dementia. This method is based on the hypothesis that human behavior is controlled by the prefrontal cortex using cognitive information of 5 senses. Information flow is that information perceived by 5 senses is aggregated in the prefrontal cortex, human makes action decisions using the information and the motor association area constructs a program that controls the human behavior. So, detecting the slight decline of the prefrontal cortex must be useful for the screening for the initial stage of dementia. Under the above consideration, CWPT which is the combination of Stroop effect's application and recalling the episodic memory is devised. In order to obtain evidence, analysis by near-infrared spectroscopy, comparison with other neuropsychological tests, and correlation with WCST (Wisconsin Cards Sorting Test) were examined<sup>1)</sup>. In this presentation, criteria of this test for screening are shown on 60's, 70's and 80's, which are obtained using data of 1584 healthy people.



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### ***Speaker Biography:***

Takaki Shimura worked in the field of BME (biomedical engineering) at Fujitsu Laboratories Ltd. from 1969 to 2000.



Next, he worked at Tokai University as professor, researching about the prefrontal lobe activation using NIRS and neuropsychological tests for early stage of dementia from 2000 to 2007. He founded daycare services in Sosei Ltd. to apply his inventions of the brain rehabilitation since 2009. He gets the engineering fellow from Japan Society of Ultrasound in Medicine and Phd. from Tokyo University. He is the chairman of BME on Dementia Group of Japanese Society for Medical and Biological Engineering

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