

MASCC Outstanding Young Investigator Award

Chia Jie Tan

Chia Jie Tan has been recognized as this year's Outstanding Young Investigator for his research on the association between a brain-derived neurotrophic factor single nucleotide polymorphism and cognitive function following chemotherapy. Tan's award-winning abstract is titled "Protective Effect of Brain-Derived Neurotrophic Factor (BDNF) Genetic Polymorphism (RS6265) Against Chemotherapy-Related Cognitive Decline in Early-Stage Breast Cancer Patients: A Validation Study."*

Tan and his research team had previously observed that BDNF single nucleotide polymorphism (rs6265) protects against cognitive decline in patients undergoing chemotherapy. The effects were most pronounced in the domains of multitasking and verbal ability. The present research, conducted between February 2014 and November 2017, aimed to validate these associations in a prospective, longitudinal study of breast cancer patients recruited and assessed before, during, and after chemotherapy.

189 patients, mean age 51.8±9.0 years, with early-stage breast cancer, were successfully genotyped. 123 patients underwent anthracycline-based chemotherapy and 86 reported cognitive decline in at least one domain. Cognitive function was evaluated in six domains, with cognitive decline defined as more than a 15% reduction from pre-chemotherapy scores. The study design controlled for age, education level, ethnicity, anxiety, insomnia, fatigue, chemotherapy regimen, and menopausal status. Results showed that the odds of cognitive decline were lower among BDNF Met allele carriers in three domains: multitasking, memory, and mental acuity. The results validate previous findings that the BDNF polymorphism confers varying degrees of protection in some cognitive domains.

Chia Jie Tan is a Board Certified Oncology Pharmacist and a PhD candidate in the Department of Pharmacy, National University of Singapore. He has experience in oncology, hematology, and cytotoxic reconstitution services and is also interested in health economics and cancer epidemiology, as well as cancer supportive care and survivorship. Chia Jie told us that he is honored to receive the Outstanding Young Investigator Award and adds that this would not have been possible without the guidance of his supervisor, Alex Chan, and the support of his fellow research team members. He is looking forward to the meeting in Vienna to keep abreast of the latest research in supportive care and to learn from other researchers in the field.

*Tan CJ, Toh YL, Yeo AHL, Shwe M, Gan YX, Dent RA, Ng RCH, Yap YS, Loh KWJ, Lee GE, Tan TJY, Beh SY, Wong M, Khor CC, Ho HK, Chan A. Protective Effect of Brain-Derived Neurotrophic Factor (BDNF) Genetic Polymorphism (RS6265) Against Chemotherapy-Related Cognitive Decline in Early-Stage Breast Cancer Patients: A Validation Study.