**Title**

SMARTp: A SMART design for nonsurgical treatments of chronic periodontitis with spatially referenced and nonrandomly missing skewed outcomes

**Abstract**

We propose dynamic treatment regimes for periodontitis that studied via a sequential multiple assignment randomized trial design. We propose novel cluster-level sample size methods that factor in typical features of periodontal responses. Simulation studies are conducted. An R package “SMARTp” implementing our sample size formula is available at CRAN.

**Biography**

Dr Kenny Xu is a data scientist at Children Medical Research Institute, The University Of Sydney, Australia. He is a former postdoc research fellow at Centre for Quantitative Medicine, Duke-NUS Medical School, Singapore. He awarded PhD in statistics at Macquarie University, Australia, 2014. His research mainly focuses on developing novel statistical methodologies that can be utilised in the field of personalised medicine research such as dynamic treatment regimes for chronic disease, mobile health for behaviour intervention, risk score based on protein selection to predict the survival outcome of cancer.

**Photo**

A person wearing glasses and smiling at the camera

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