Curriculum Vitae

Kuan Liao

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Educational Background

PhD in Health Informatics, University of Manchester 01/2021 – 03/2024
Thesis title: *Patient-reported outcomes as a predictive factor to inform treatment decisions in non-small cell lung cancer patients treated with immunotherapy.*
MSc in Health Data Science (with distinction), University of Manchester 09/2019 – 12/2020
BM in Preventive Medicine, Tianjin Medical University 09/2014 – 07/2019

Research Experience

Research Associate, School of Nursing, The Hong Kong Polytechnic University 07/2024 – Now
Research focuses on leveraging routinely collected electronic patient-reported outcome data to improve oncology practice and cancer care.

- Led a review project summarising the benefits, challenges and impact of routinely collected electronic patient-reported outcome measures in oncology practice.
- Co-led a research project evaluating the validity, reliability, and responsiveness of the Christie Symptom Inventory, a routinely collected electronic patient-reported outcome measure.

Research Associate, Peking University Clinical Research Institute 01/2024 – 06/2024
Research focuses on machine learning and statistical prediction modelling for cardiovascular disease based on electronic health record data.

- Drafted data analysis section of National Natural Science Foundation of China and Key Programme for International Cooperation of Ministry of Science and Technology grants.
- Led database management for electronic health record-based cardiology research data from Peking University Third Hospital.

Publications

- **Liao, K**., van der Veer, S. N., Gomes, F., Faivre-Finn, C., Moliner, L., Yorke, J., & Sperrin, M. Development, validation and clinical utility of electronic patient-reported outcome measures-enhanced prediction models for overall survival in people with advanced NSCLC receiving immunotherapy. JCO Clin Cancer Inform (in press).
- **Liao, K**., Wong, D. C., Gomes, F., Faivre-Finn, C., Moliner, L., Sperrin, M., Yorke, J., & van der Veer, S. N. Exploring the value of routinely collected data on EQ-5D-5L and other electronic patient-reported outcome measures as prognostic factors in adults with advanced non-small cell lung cancer receiving immunotherapy. BMJ Oncology. (2024). 3(1),
- Spencer, K.L., Absolom, K.L., Allsop, M.J., Relton, S.D., Pearce, J., **Liao, K.**, Naseer, S., Salako, O., Howdon, D., Hewison, J., Velikova, G., Faivre-Finn, C., Bekker, H.L., van der Veer, S.N.. Fixing the Leaky Pipe: How to Improve the Uptake of Patient-Reported Outcomes–Based Prognostic and Predictive Models in Cancer Clinical Practice. JCO Clin Cancer Inform. 2023; e2300070.
- **Liao K**, Wang T, Coomber-Moore J, Wong DC, Gomes F, Faivre-Finn C, Sperrin M, Yorke J, van der Veer SN. Prognostic value of patient-reported outcome measures (PROMs) in adults with non-small cell Lung Cancer: a scoping review. BMC Cancer. 2022 Oct 19;22(1):1076
- **Liao K**, Gu Y, Liu M, Fu J, Wang X, Yang G, et al. Association of dietary patterns with depressive symptoms in Chinese postmenopausal women. British Journal of Nutrition. 2019 Nov;122(10):1168–74.

ISOQOL student poster presentation award finalist

- To what extent, how and how robustly have PROMs been investigated as prognostic factors in non-small cell lung cancer: a scoping review. ISOQOL 29th Annual Conference

Academic Service & Teaching Experience

Journal and conference paper reviewer 06/2023 – Now

- Provided constructive feedback on articles relating to clinical prediction models in European Journal of Cancer, European Journal of Cancer Care, BMC Medical Informatics and Decision Making and Journal of Clinical Epidemiology.
- Reviewed poster and oral presentation abstracts submitted to The Annual Chinese Biostatistics Conference 2024.

Teaching assistant of over 10 modules – University of Manchester 09/2021 – 01/2024

- Proposed two MSc dissertation projects and co-supervised one project on systematic review of prognostic models using PROMs as predictors for overall survival in people with cancer.
- Led and chaired training sessions for conducting systematic reviews and over 5 practical sessions for fundamentals of statistics, clinical prediction modelling, and causal inference.
- Collaborated with senior academics to develop a marking scheme for essay-based assignments.
- Monitored online questions and provided support during weekly office hours.

Languages & Skills

Technical skills: R; SPSS Statistics; Tableau; Python; SQL.
Data science and analytics: Proven ability of applying statistical and machine learning techniques, prediction modelling, missing data handling, data wrangling with large datasets to conduct high-impact research.
Languages: English (Work fluent), Mandarin (Native)