



Allen Liu Yan Lun

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Department of General Medicine, KTPH
Clinical Assistant Professor, NUS

Research Interests:

- Acute Kidney Injury
- Diabetic Kidney Disease
- Peritoneal Dialysis

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Biography

Dr. Allen Yan Lun Liu, Senior Consultant Nephrologist at Khoo Teck Puat Hospital, Singapore, subspecialises in peritoneal dialysis, dialysis access care, acute kidney injury, and diabetic kidney disease. He previously served as Section Chief of Renal Medicine and continues to service innovation and clinical excellence at KTPH and beyond.

Dr. Liu is currently the Program Lead for Peritoneal Dialysis and Catheter Insertion at KTPH and serves as Chairman of the National Kidney Foundation Research Committee.

He was awarded the National Medical Research Council (NMRC) Clinician Innovator Award in 2024 for his work integrating technology into clinical nephrology—leading projects in AI-assisted lung ultrasound, point-of-care spectroscopy, and continuous glucose monitoring for dialysis patients.

Notably, his team is pioneering the use of machine learning for peritoneal dialysis infection diagnostics, prediction of chronic kidney disease progression and developing 3D printing models for simulation-based dialysis access training models.

In addition to over 40 peer-reviewed publications, Dr. Liu is actively mentoring academic and research outputs for nurses, allied health professionals, renal coordinators and the next generation of nephrologists.

Selected Publications

- Liu AYL, Prowle J, Licari E, Uchino S, Bellomo R. Changes in blood pressure before the development of nosocomial acute kidney injury. *Nephrol Dial Transplant*. 2009 Feb;24(2):504-11. doi: 10.1093/ndt/gfn490. Epub 2008 Sep 3. PMID: 18768582.

- Prowle JR, Liu AYL, Licari E, Bagshaw SM, Egi M, Haase M, Haase-Fielitz A, Kellum JA, Cruz D, Ronco C, Tsutsui K, Uchino S, Bellomo R. Oliguria as predictive biomarker of acute kidney injury in critically ill patients. *Crit Care*. 2011 Jul 19;15(4):R172. doi: 10.1186/cc10318. PMID: 21771324; PMCID: PMC3387614.
- Nikam M, Renaud CJ, Lee JS, Saifull SFB, Liu AYL, Lim EK, Seow YY, Yeoh LY. Outcomes of a nephrologist-driven tunnelled dialysis catheter insertion service in South East Asia. *J Vasc Access*. 2017 Jul 14;18(4):279-283. doi: 10.5301/jva.5000746. Epub 2017 Jun 23. PMID: 28665465.
- Liu AYL, Wang J, Nikam M, Lai BC, Yeoh LY. Low, rather than High, Body Mass Index Is a Risk Factor for Acute Kidney Injury in Multiethnic Asian Patients: A Retrospective Observational Study. *Int J Nephrol*. 2018 Jan 9;2018:3284612. doi: 10.1155/2018/3284612. PMID: 29552359; PMCID: PMC5818948.
- Low S, Lim SC, Zhang X, Wang J, Yeo SJD, Yeoh LY, Liu YL, Subramaniam T, Sum CF. Medical costs associated with chronic kidney disease progression in an Asian population with type 2 diabetes mellitus. *Nephrology (Carlton)*. 2019 May;24(5):534-541. doi: 10.1111/nep.13478. PMID: 30141833.
- Lim GJ, Liu YL, Low S, Ang K, Tavintharan S, Sum CF, Lim SC. Medical Costs Associated with Severity of Chronic Kidney Disease in Type 2 Diabetes Mellitus in Singapore. *Ann Acad Med Singap*. 2020 Oct;49(10):731-741. PMID: 33283836.
- Liu AYL, Pek S, Low S, Moh A, Ang K, Tang WE, Lim Z, Subramaniam T, Sum CF, Lim SC. Association of overhydration and serum pigment epithelium-derived factor with CKD progression in diabetic kidney disease: A prospective cohort study. *Diabetes Res Clin Pract*. 2021 Apr;174:108754. doi: 10.1016/j.diabres.2021.108754. Epub 2021 Mar 17. PMID: 33741351.
- Liu AYL, Low S, Yeoh E, Lim EK, Renaud CJ, Teoh STY, Tan GFL, Chai CC, Liu B, Subramaniam T, Sum CF, Lim SC. A real-world study on SGLT2 inhibitors and diabetic kidney disease progression. *Clin Kidney J*. 2022 Feb 16;15(7):1403-1414. doi: 10.1093/ckj/sfac044. PMID: 35756732; PMCID: PMC9217649.
- Tan GFL, Du T, Liu JS, Chai CC, Nyein CM, Liu AYL. Automated lung ultrasound image assessment using artificial intelligence to identify fluid overload in dialysis patients. *BMC Nephrol*. 2022 Dec 24;23(1):410. doi: 10.1186/s12882-022-03044-7. PMID: 36564742; PMCID: PMC9789672.
- Chen S, Liu JS, Chai CC, Si C, Tan SH, Ravindran HR, Martinez MTP, Gao Y, Yeap YR, Liu AYL. Handheld ultrasound-guided cannulation of difficult hemodialysis arteriovenous access: A

randomized controlled trial. Hemodial Int. 2023 Jan;27(1):21-27. doi: 10.1111/hdi.13050. Epub 2022 Oct 25. PMID: 36281908.

- Tan SSH, Lee K, Deepak RN, Tan SH, Lim EK, Liu AYL. Comparison of BACTEC versus conventional enrichment medium for peritoneal dialysate fluid culture. Clin Nephrol. 2023 Jan;99(1):18-23. doi: 10.5414/CN110788. PMID: 36420899.
- Lim Zhi Ting M, Kong May Ching C, Chung Cheen C, Liu AYL. Role of renal vascular coordinator on access flow dysfunction: A quality improvement initiative on improving patency rate. J Vasc Access. 2025 Feb 4:11297298251316953. doi: 10.1177/11297298251316953. Epub ahead of print. PMID: 39905700.

Notable Research and Innovation Awards & Grants from Past 5 Years

Name of Awards & Grants	Year Obtained
Alexandra Health Enabling Grant	2020
NMRC Clinician Investigators Salary Support Programme (CISSP)	2020
KTPH Science - Translational and Applied Research (STAR I)	2024
NMRC Clinician Innovator Award	2024
Rapid Prototyping Grant, KTPH	2025