

On launching a new journal ‘*Perioperative Precision Medicine*’: a rapidly evolving discipline

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Anesthesia is indispensable for most types of surgery and a key factor to ensure the safety and to improve the prognosis of patients. With the rapid development of science and technology and the persistent enhancement of anesthesiology expertise, it is no longer sufficient to put a singular emphasis on anesthesia during surgery. Anesthesiology is now evolving towards perioperative medicine, which involves patient-centered care and value-based multidisciplinary management of surgical patients in the perioperative period.

The majority of fatalities occur during the perioperative period due to major organ injuries and associated complications after surgery. Therefore, the aim of perioperative medicine should focus on minimizing the occurrence of major postoperative adverse effects, promoting high-quality recovery for patients, and reducing mortality, especially for critically ill patients.

The modern medicine has evolved from empirical medicine, evidence-based medicine to precision medicine. Precision medicine aims to prevent or treat disease based on a patient's genetic, living environment and lifestyle. In the perioperative period, personalized medical care would ensure the safety of patient and improve treatment efficacy. Precision medicine has developed with the rapid progress in gene sequencing technology and cross-application of bioinformatics and big data analysis. Recently,

great achievements of big data analysis and artificial intelligence technologies, especially in image recognition and diagnosis, are leading perioperative precision medicine to a new era.

In light of this, we have launched *Perioperative Precision Medicine* (PPM), with the aims to deepen the understanding of perioperative medicine in the new era and to advance personalized diagnosis, treatment and prognosis. PPM serves as a platform to share the cutting-edge research findings in the field, and welcomes research studies, reviews, brief communications, perspectives, comments, etc.

This inaugural issue of PPM highlights the advancements made in ultrasound-guided radial artery catheterization and end-tidal carbon dioxide monitoring in non-intubated patients. Additionally, it summarizes the interaction between C-type lectin receptors and *Candida albicans* and the treatment prospects, and reviews the role and significance of miRNAs as regulators of the host antifungal immune response in fungal infections which are an important part of perioperative infections that contributes to decreased patient survival.

We hope to provide new impetus to the scientific research and clinical practice in perioperative medicine. Also, we invite like-minded researchers, scientists, and clinicians from around the world to join us.



Editor-in-Chief of Perioperative Precision Medicine

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Professor Xiong is the Director of Shanghai Key Laboratory of Anesthesiology and Brain Functional Modulation, Director of Clinical Research Center for Anesthesiology and Perioperative Medicine, Translational Research Institute of Brain and Brain-Like Intelligence, and the President of Shanghai Fourth People's Hospital, School of Medicine, Tongji University.

Prof. Xiong has published 269 SCI papers in *JAMA Surg*, *Sci Transl Med*, *J Am Coll Cardiol*, *Am J Respir Crit Care Med*, *J Clin Invest*, *Anesthesiology*, etc. He is the Chief Scientist of Project 973 of the Ministry of Science and Technology, academic leader of Cheung Kong Scholars Innovation Team of MOE and Innovation Team in Key Areas of MOST. He was awarded the First Prize of National Science and Technology Progress Award.

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