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"*Likely as the recent Cancer Moonshot Initiative highlights, this book well describes the importance of genetics/genomics-based personalized therapies to improve cancer treatments. This field is growing rapidly, and it is certain that many scientists should obtain professional knowledge of 'cancer precision medicine' to cure more cancer patients.*"

Prof. Yusuke Nakamura
University of Chicago, USA

"*At a time when an explosive increase in data has combined with rapidly evolving treatment paradigms, it has become particularly challenging for modern clinicians and medical researchers alike to put these advances in knowledge and practice into a proper context. It is in light of this predicament that this new volume edited by Dr. Il-Jin Kim provides a much-needed organization and harmonic understanding to the cacophony of information regarding the elusive realm of precision medicine. Covering an exhaustive array of topics ranging from the basic science of tumor modeling to the biology of tumor microenvironments to the horizon of cancer immunotherapy and advances for specific cancer types, this clearly written and very readable compilation provides a solid foundation for comprehending the rapidly advancing dawn of a truly new, personalized, precision approach to the treatment and, hopefully, the cure of cancer.*"

Prof. Michael J. Mann
University of California, San Francisco

This book covers almost all fields of cancer genetics and genomics for personalized medicine. Targeted therapy, or precision medicine, or personalized medicine is becoming a standard treatment for many diseases, including cancer. However, how much do we know about the personalized medicine approach? This lucid book helps undergraduate and graduate students, professional researchers, and clinicians to better understand the key concept of personalized medicine.

The most up-to-date topics on personalized medicine in this book cover the recent trends in and updates on lung, gastric, liver, breast, and other types of cancers. Circulating tumor cell, cell-free circulating DNA, and microRNAs are discussed as new diagnostic and prognostic markers for cancer. The avatar mouse model is also discussed for maximizing treatment efficacy and prognosis prediction, and so is microenvironment as a drug resistance mechanism. With classical and new pathological approaches, the book provides a systemic overview of personalized immunotherapies and hyperthermic intraperitoneal chemotherapy, followed by new emerging fields of hereditary cancer, thereby equipping readers to eventually contribute in developing more advanced tools and therapies for curing cancer.

Il-Jin Kim is principal investigator and director of Applied Genomics in the UCSF Thoracic Oncology Program. His work focuses on the identification of novel therapeutic targets and diagnostic markers for various types of human cancers. Dr. Kim investigates human cancers using state-of-the-art technologies, including next-generation sequencing (NGS) and system genetic tools that he developed with his team. He has developed several innovative microarrays and pioneered new methods of high-throughput mutation screening, for which he holds numerous patents. He has published more than 70 papers, including in *Science* and *Nature Communications*. He has also received three awards from the American Association for Cancer Research for developing innovative genetic and diagnostic assays. Dr. Kim graduated from the College of Veterinary Medicine, Seoul National University, with a BS and DVM (magna cum laude), and a PhD in tumor biology. In 2010, he joined the UCSF faculty in the Department of Surgery.

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