Preface

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Guest Editor

“It is not the strongest who survive, nor the most intelligent, but those most responsive to change”

—Charles Darwin

The rate of change over time in technology and bioresearch has been extremely rapid in the last few decades. The diffusion and uptake of technology into the clinical practice of surgery and anesthesia has had an immense impact, particularly in cardiac surgery and anesthesia. The advanced technology in ultrasound, imaging, miniature instrumentation, and advanced knowledge in therapeutic mechanism of drugs has greatly affected perioperative monitoring, diagnosis, and treatment of our cardiac surgical patients. We must understand the novelty and direction of technology and cardiovascular science leading the cardiac surgery, in order to position cardiac anesthesiology in advancing the innovative care of these patients. These include minimally invasive, robotic, transcatheter, endovascular, and transmyocardial laser cardiac surgery procedures.

Anesthesiologists have been instrumental in producing evidence-based medicine that is valid and clinically relevant. The increased availability, credibility, applicability, and generalizability of clinical research have resulted in an improvement in monitoring, diagnosis, and management of cardiac anesthesiology. These include the genomics study to assess risk and outcome, analgesia control, and perioperative organs protection.

The theme of this issue of *Anesthesiology Clinics* is cardiac anesthesia: today and tomorrow. I have gathered a distinguished panel of clinician–scientists

and experts in the field to summarize the current state of the evidence and the future direction in the topics of genomics, perioperative echocardiography, minimally invasive and robotic cardiac surgery, transcatheter valvular surgery, endovascular stenting of thoracic aortic aneurysm, transmyocardial laser revascularization, and perioperative organ (brain, heart, liver, and kidney) protection and management, as well as postoperative analgesia in cardiac surgery. Quoting one of our legendary Canadian athletes, Wayne Gretsky, “I don’t skate to where the puck is; I skate to where the puck is going.” I am sure readers will benefit greatly from the insightful articles written by these authors for their clinical practice today and tomorrow.

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