Preface
Organ Failure in Critical Illness

Timothy B. Hackett, DVM, MS
Guest Editor

This issue of *Veterinary Clinics of North America: Small Animal Practice* is devoted to a systems-based review of organ dysfunction seen in our most critical patients. With advances in trauma and emergency care, patients surviving previously fatal problems now succumb to the failure of one or more major systems. While devastating, multiple organ failure is really a disease of success. A single patient may suffer altered function in any or all of the systems discussed in this text. My goal in bringing together these experts and articles is to provide a single reference to review causes, diagnosis, management, and prevention of vital organ dysfunction in small animals. I hope this will be a useful reference for small animal practitioners managing these complex cases.

After an introduction on the history, epidemiology, and understanding of organ failure, experts discuss individual organ systems. The authors are all practicing specialists who see and manage these cases in their respective practices. I will admit to a personal bias toward the respiratory system. Respiratory failure and inadequate tissue oxygenation are leading causes of the failure of other organ systems. Dr Campbell starts off with important insight into the acute respiratory distress syndrome and respiratory failure in the critically ill. While hypotension and inadequate cardiac output as causes of organ failure are discussed in nearly every article, Dr Bulmer’s article on cardiac dysfunction highlights the myocardial changes seen in the septic and systemically ill. The kidney and liver are often the most obvious systems failures we associate with critical illness. Dr Lunn presents the causes and management of acute renal failure and Drs McCord and Webb discuss the manifestations and management of hepatic failure. The role of the gastrointestinal tract in critical illness including the signs and consequences of gastrointestinal failure are also discussed.

Moving away from classic organ systems, Dr Martin discusses the important role of the adrenal gland in the body’s response to stress. Her article focuses on the recognition and management of adrenal insufficiency associated with critical illness.
Drs Brainard and Brown nicely summarize the challenges of managing coagulation defects associated with so many serious conditions. Drs Hackett and Gustafson review altered drug metabolism in critical illness, bringing the clinical pharmacologist’s perspective to these heavily medicated patients. Dr Butler rounds out this issue with an overview of goal-directed therapy. Her article gives many practical treatment options for managing high-risk patients.

It has been my privilege to put together this issue. I want to thank the section authors for their time and dedication. I also want to thank Mr John Vassallo and his staff at Saunders/Elsevier for their patience and assistance in compiling this reference. Critical care medicine is constantly evolving. I look forward to the discovery and dissemination of practical solutions to these all too common complications.

Timothy B. Hackett, DVM, MS
Department of Clinical Sciences
Colorado State University
300 West Drake Road
Fort Collins, CO 80523, USA

E-mail address: Tim.Hackett@colostate.edu