



### A Review of Current and Emerging Approaches to Address Failure-to-Rescue (Review Article) 421

Early recognition of physiologic decline plays a major role in the failure-to-rescue problem.

### Assessing the Diagnostic Accuracy of Pulse Pressure Variations (PPV) for the Prediction of Fluid Responsiveness: A “Gray Zone” Approach. 231

PPV may be inconclusive in 25% of patients under general anesthesia. See the accompanying Editorial View on page 229

### Phosphorylation of GSK-3 $\beta$ Mediates Intralipid-induced Cardioprotection against Ischemia/Reperfusion Injury 242

Postischemic administration of intralipid is effective against ischemia/reperfusion injury. See the accompanying Editorial View on page 226

### Estimating Anesthesia Time Using the Medicare Claim: A Validation Study 322

There was very good concordance between chart review for procedure minutes and claimed minutes.

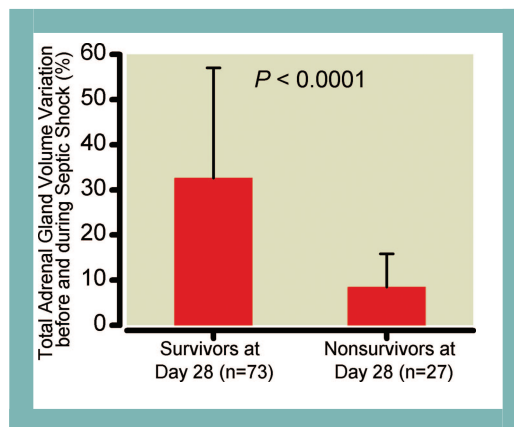
### Metastatic Pediatric Paraganglioma Presenting during the Course of an Elective Surgery (Case Scenario) 408

Coincidental diagnosis of pediatric metastatic malignant paraganglioma is discussed.

### R2: The Absence of Adrenal Gland Enlargement during Septic Shock Predicts Mortality—A Computed Tomography Study of 239 Patients 334

Several risk factors have been described for mortality in patients with septic shock, including adrenal gland volume. The current study used computed tomography to determine the prognostic value of adrenal gland volumes in patients with ( $n = 184$ ) or without ( $n = 55$ ) septic shock in determining mortality. Mortality was 32% at intensive care unit discharge in patients with septic shock. Adrenal volume less than  $10 \text{ cm}^3$  was

associated with higher 28-day mortality in patients with septic shock. Adrenal volume larger than  $10 \text{ cm}^3$  was an independent predictor of intensive care unit survival. This study supports further investigation into the use of adrenal gland volume as a surrogate for adrenal gland function in patients with sepsis. See the accompanying Editorial View on page 223



### A Cost-Benefit Analysis of the ENIGMA Trial 265

Previously, the ENIGMA trial reported lower rates of major complications in patients who received a nitrous oxide-free anesthetic when undergoing major surgery. Although nitrous oxide may be a relatively inexpensive drug, the cost of increased adverse events may be considerable. A retrospective cost analysis of patients ( $N = 2,050$ ) from the ENIGMA trial was performed. Total costs were significantly lower (by \$2,366) in the nitrous oxide-free group. Further sensitivity analyses also significantly favored the nitrous oxide-free group. Together, the lower adverse event rate and marked cost reductions in the nitrous oxide-free group, the ENIGMA trial and this retrospective cost analysis do not support the continued use of nitrous oxide in patients undergoing major surgery.

### Epidural Analgesia Is Associated with Improved Health Outcomes of Surgical Patients with Chronic Obstructive Pulmonary Disease 315

Patients with chronic obstructive pulmonary disease (COPD) have a 300 to 700% increased risk of postoperative pulmonary complications compared with patients without COPD. A cohort study of 541 patients with COPD undergoing major abdominal surgery was conducted to evaluate the effect of epidural analgesia on postoperative outcomes. Sixty percent of patients received epidural analgesia in addition to general anesthesia. The incidences of postoperative pneumonia and 30-day mortality were lower in patients who received epidural analgesia. Epidural analgesia was also associated with improved outcome for postoperative pneumonia. This study suggests the benefit of epidural analgesia in patients with COPD undergoing major abdominal surgery.