

## SUBJECT INDEX TO VOLUME 105

Entries from JOURNAL departments are identified as follows: Case Reports—(CR); Classic Papers Revisited—(CPR); Clinical Investigations—(CI); Clinical Concepts and Commentary—(CCC); Correspondence—(CO); Economics—(EC); Editorial Views—(EV); Educational Material—(EM); Journal Symposium—(JS); Laboratory Investigations—(LI); Pain and Regional Anesthesia—(PRA); Practice Guidelines—(PG); Report of Scientific Meeting—(RSM); Review Article—(RA); Special Article—(SA).

### A

#### Academic anesthesia

- academic anesthesia and M.D.-Ph.D.s (CO) [Campagna], 627
- anesthesiologist scientist: endangered species (CO) [Gelman], 624
- image not living up to goal (CO) [Fleisher et al.], 626
- Royal College recommendations to improve academic anesthesia in the United Kingdom: how they compare with United States proposals (CO) [Pandit], 625

#### Acetylcholine and acetylcholine receptors

- distinct pharmacologic properties of neuromuscular blocking agents on human neuronal nicotinic acetylcholine receptors (LI) [Jonsson et al.], 521
- volatile anesthetic effects on M<sub>3</sub> muscarinic receptor-Gα<sub>q</sub> coupling (LI) [Nakayama et al.], 313

#### Acute respiratory distress syndrome (ARDS)

- cardiorespiratory effects of proportional assist and pressure-support ventilation in patients with acute lung injury/ARDS (CI) [Kondili et al.], 703

#### Adenosine triphosphate (ATP)

- distinct roles for sarcolemmal and mitochondrial ATP-sensitive potassium channels in isoflurane-induced protection against oxidative stress (LI) [Marinovic et al.], 98
- mechanism of cardiac sarcolemmal ATP-sensitive potassium channel activation by isoflurane in a heterologous expression system (LI) [Bienengraeber et al.], 534

#### Adrenergic agents and receptors

- role of the β<sub>1</sub>-adrenergic pathway in anesthetic and ischemic preconditioning against myocardial infarction in the rabbit heart *in vivo* (LI) [Lange et al.], 503

#### Age/aging

- effects of aging on nociception in mice (PRA) [Finkel et al.], 360
- effects of desflurane in senescent rat myocardium (LI) [Rozenberg et al.], 961

#### Ahaptoglobinemia

- anaphylaxis after albumin infusion in patient with (CR) [Shimode et al.], 425

#### Air embolism

- influence of endothelial glycocalyx degradation and surfactants on air embolism adhesion (LI) [Eckmann et al.], 1220

#### Airway management

- airway injuries after one-lung ventilation: comparison between double-lumen tube and endobronchial blocker (CI) [Knoll et al.], 471
- alfentanil dosage when inserting classic laryngeal mask airway (CI) [Yu et al.], 684
- effect of propofol anesthesia and continuous positive airway pressure on upper airway size and configuration in infants (CI) [Crawford et al.], 45
- with endotracheal tube *vs.* Combitube<sup>®</sup> during parabolic flights (CI) [Rabitsch et al.], 696
- extent and localization of changes in upper airway caliber with varying concentrations of sevoflurane in children (CI) [Crawford et al.], 1147
- improving success of retrograde tracheal intubation (CO) [Nadara-jan], 855
- incidence and predictors of difficult and impossible mask ventilation (CI) [Kheterpal et al.], 885
- inhibitory effects of sevoflurane on hyperreactive airway smooth muscle contractility in guinea pigs (LI) [Iwasaki et al.], 753
- predicting trouble in (EV) [Yentis], 871
- ProSeal*<sup>®</sup> laryngeal mask airway size and fiberoptic endotracheal intubation (CO) [Colas et al.], 1283

- retropharyngeal hematoma after stellate ganglion block (PRA) [Higa et al.], 1238

#### Albumin

- anaphylaxis after albumin infusion in patient with ahaptoglobinemia (CR) [Shimode et al.], 425

#### Alfentanil

- alfentanil dosage when inserting classic laryngeal mask airway (CI) [Yu et al.], 684
- closed-loop control of mean arterial blood pressure during surgery with alfentanil (CI) [Luginbühl et al.], 462

#### Ambesh maneuver

- during subclavian vein catheterization (CO) [Singh et al.], 1062

#### Ambulatory surgery

- effect of patient-controlled perineural analgesia on rehabilitation and pain after ambulatory orthopedic surgery (PRA) [Capdevila et al.], 566

#### American Society of Anesthesiologists (ASA)

- ASA postoperative visual loss registry (CI) [Lee et al.], 652
- Bacon, McGoldrick, Lema, *The American Society of Anesthesiologists: A Century of Challenges and Progress* (EM) [Waisel], 863
- Nicholas P. Franks, Ph.D., recipient of 2006 Excellence in Research Award [Evers], 649
- practice guidelines for perioperative blood transfusion and adjuvant therapies (PG) [ASA Task Force], 198

#### Amino acids

- heme oxygenase 1, nuclear factor E2-related factor 2, and nuclear factor κB are involved in heme inhibition of type 2 cationic amino acid transporter expression and L-arginine transport in stimulated macrophages (LI) [Tsai et al.], 1201
- protein balance and postoperative infusion of (CI) [Donatelli et al.], 253

#### Amputation

- effect of gabapentin on pain after (PRA) [Nikolajsen et al.], 1008

#### Anaphylaxis

- anaphylaxis after albumin infusion in patient with ahaptoglobinemia (CR) [Shimode et al.], 425

#### Anatomy

- a new method for detecting the proximal aortic arch and innominate artery by transesophageal echocardiography (CO) [Li et al.], 226
- sheath of the brachial plexus (PRA) [Cornish et al.], 563

#### Anemia

- splanchnic oxygen consumption in impaired during severe acute normovolemic anemia in anesthetized humans (CI) [Mathru et al.], 37

#### Anesthesia information management systems

- automated anesthesia charge capture and submission (EV) [Abouleish et al.], 5
- development of a module for point-of-care charge capture and submission using an anesthesia information management system (EC) [Reich et al.], 179

#### Anesthesia machines and circuits

- performance of new anesthesia ventilators and ICU ventilators in pressure-support mode (LI) [Jaber et al.], 944

#### Anesthesia preoperative medicine clinic

- beyond surgery cancellations (CO) [Qiu et al.], 224
- effects of (CO) [van Klei et al.], 224
- value of preoperative clinic visits in identifying issues with potential impact on operating room efficiency (EC) [Correll et al.], 1254

**Anesthesiologists**

- academic anesthesia and M.D.–Ph.D.s (CO) [Campagna], 627  
 anesthesiologist scientist: endangered species (CO) [Gelman], 624  
 Dershwitz, Walz, *McGraw-Hill Specialty Board Review: Anesthesiology Examination & Board Review, 6th Edition* (EM) [Smith], 1067  
 Edrige, Sykes, Feldman, *Careers in Anesthesiology IX: Three Pioneer British Anaesthetists* (EM) [Southorn], 1285  
 image not living up to goal (CO) [Fleisher et al.], 626  
 research training in anesthesiology (EV) [Warner et al.], 446  
 Robertson, Lubarsky, Ranasinghe, *Anesthesiology Board Review, 2nd Edition* (EM) [Ritter], 1067  
 role in prevention of surgical site infections (CCC) [Mauermann et al.], 413 (CME erratum, 868)  
 Shaw, *The Ultimate Guide to Finding the Right Job after Residency* (EM) [Lunn], 1066  
 teamwork in the operating room (CI) [Sexton et al.], 877  
 Yentis, *A View from the Head End* (EM) [Ereth], 229

**Anesthesiology**

- acknowledgment of editorial reviewers, 1291  
 instructions for obtaining journal CME credit, 231, 439, 639, 867, 1069, 1289  
 journal-related and other special activities at the 2006 American Society of Anesthesiologists annual meeting [Todd et al.], 449

**Animal studies. See Models and modeling****Antifibrinolytic therapy**

- antifibrinolytic therapy use to mitigate blood loss during staged complex major spine surgery: postoperative visual color changes after tranexamic acid administration (CR) [Cravens et al.], 1274  
 antifibrinolytics and allogeneic blood transfusion in orthopedic surgery (RA) [Zufferey et al.], 1034

**Antiplatelet therapy**

- quantifying effect of antiplatelet therapy (CI) [Agarwal et al.], 676

**Aorta**

- a new method for detecting the proximal aortic arch and innominate artery by transesophageal echocardiography (CO) [Li et al.], 226  
 pseudothrombus in aorta (CO) [Fukumoto et al.], 860

**Aprotinin**

- a case of severe diffuse venous thromboembolism associated with aprotinin and hypothermic circulatory arrest in a cardiac surgical patient with factor V Leiden (CR) [Shore-Lesserson et al.], 219

**L-Arginine**

- heme oxygenase 1, nuclear factor E2-related factor 2, and nuclear factor  $\kappa$ B are involved in hemin inhibition of type 2 cationic amino acid transporter expression and L-arginine transport in stimulated macrophages (LD) [Tsai et al.], 1201

**Arginine vasopressin**

- a century of arginine vasopressin research leading to new therapeutic strategies (EV) [Dünser et al.], 444  
 vasopressin system: physiology and clinical strategies (RA) [Treschan et al.], 599

**Asepsis**

- asepsis during neuraxial instrumentation (EV) [Hepner], 241

**Aspirin**

- quantifying effect of antiplatelet therapy (CI) [Agarwal et al.], 676

**Auditory evoked potentials**

- effects of ketamine and rocuronium and A-line<sup>®</sup> auditory evoked potential index, Bispectral Index, and spectral entropy monitor during steady state propofol and remifentanyl anesthesia (CI) [Vereecke et al.], 1122

**Author correction, 1287****B****Baclofen**

- CSF and spinal cord distribution of baclofen and bupivacaine during slow intrathecal infusion in pigs (PRA) [Bernards], 169

**Benzodiazepines**

- flumazenil mimics whereas midazolam abolishes ischemic preconditioning in a rabbit heart model of ischemia-reperfusion (LD) [Rivo et al.], 65

- midazolam inhibits proinflammatory mediators in the lipopolysaccharide-activated macrophage (LD) [Kim et al.], 105  
 pharmacokinetics and pharmacodynamics of midazolam and metabolites in nonventilated infants after craniofacial surgery (CI) [Peeters et al.], 1135

**Bispectral Index**

- effects of ketamine and rocuronium and A-line<sup>®</sup> auditory evoked potential index, Bispectral Index, and spectral entropy monitor during steady state propofol and remifentanyl anesthesia (CI) [Vereecke et al.], 1122  
 implicit memory during isoflurane anesthesia (CO) [Lequeux et al.], 429  
 methylene blue treatment for methemoglobinemia and subsequent dramatic Bispectral Index reduction (CO) [Matisoff et al.], 228

**Bleeding**

- antifibrinolytic therapy use to mitigate blood loss during staged complex major spine surgery: postoperative visual color changes after tranexamic acid administration (CR) [Cravens et al.], 1274  
 antifibrinolytics and allogeneic blood transfusion in orthopedic surgery (RA) [Zufferey et al.], 1034  
 is bilateral cerebral subdural hematoma more frequent after epidural anesthesia than spinal anesthesia? (CO) [Zeidan et al.], 1277  
 rare iatrogenic cause of gastrointestinal bleeding (CO) [Mullady et al.], 1063  
 retropharyngeal hematoma after stellate ganglion block (PRA) [Higa et al.], 1238

**Blood coagulation and anticoagulation**

- a case of severe diffuse venous thromboembolism associated with aprotinin and hypothermic circulatory arrest in a cardiac surgical patient with factor V Leiden (CR) [Shore-Lesserson et al.], 219  
 effect of high- and low-molecular-weight low-substituted hydroxyethyl starch on blood coagulation during acute normovolemic hemodilution in pigs (LD) [Thyes et al.], 1228  
 mechanical ventilation with lower tidal volumes and positive end-expiratory pressure prevents alveolar coagulation (CI) [Choi et al.], 689  
 quantifying effect of antiplatelet therapy (CI) [Agarwal et al.], 676  
 regional anesthesia for parturient with venous sinus thrombosis and placental abruption undergoing fractional heparin therapy (CR) [Holzman et al.], 423

**Blood glucose variability**

- in critical care (EV) [Ouattara et al.], 233  
 and short-term mortality in critically ill patients (CI) [Egi et al.], 244

**Blood pressure**

- closed-loop control of mean arterial blood pressure during surgery with alfentanil (CI) [Luginbühl et al.], 462  
 hypotension, heart rate variability, and altered autonomic function (CO) [Latson], 1281

**Blood substitutes**

- multicenter clinical study of safety and activity of maleimide-polyethylene glycol-modified hemoglobin (Hemospan<sup>®</sup>) in patients undergoing major orthopedic surgery (CI) [Olofsson et al.], 1153

**Blood transfusion**

- antifibrinolytics and allogeneic blood transfusion in orthopedic surgery (RA) [Zufferey et al.], 1034  
 if you prick us, do we not bleed? (EV) [Weiskopf], 873  
 perioperative transfusion decisions in coronary artery disease patients undergoing coronary artery bypass surgery (CI) [Shehata et al.], 19  
 practice guidelines for perioperative blood transfusion and adjuvant therapies (PG) [ASA Task Force], 198

**Botulinum toxin**

- neuromuscular blockade monitoring complicated by preoperative cosmetic use of (CO) [Miller et al.], 862

**Brachial plexus**

- human skin microcirculation after brachial plexus block evaluated by wavelet transform of the laser Doppler flowmetry signal (CI) [Landsverk et al.], 478  
 interscalene brachial plexus block, reducing risk of entering spinal canal (CI) [Sardesai et al.], 9  
 sheath of the brachial plexus (PRA) [Cornish et al.], 563

**Brain function and disease**

- cerebral state index during propofol anesthesia (CI) [Jensen et al.], 28
- different brain activation patterns to pain and pain-related unpleasantness during the menstrual cycle (PRA) [Choi et al.], 120
- effect of epinephrine on extracellular lidocaine concentration in brain (LI) [Takahashi et al.], 984
- entwined mysteries of anesthesia and consciousness (SA) [Hameroff], 400
- gabapentin effects on tonic inhibitory conductance in hippocampal neurons (PRA) [Cheng et al.], 325
- implicit memory during isoflurane anesthesia (CO) [Lequeux et al.], 429
- influence of mannitol and furosemide, alone and in combination, on brain water content after fluid percussion injury (LI) [Todd et al.], 1176
- inhibition of glutamatergic activation of extracellular signal-regulated protein kinases in hippocampal neurons by the intravenous anesthetic propofol (LI) [Kozinn et al.], 1182
- is bilateral cerebral subdural hematoma more frequent after epidural anesthesia than spinal anesthesia? (CO) [Zeidan et al.], 1277
- neurocysticercosis masquerading as eclampsia (CR) [Grondin et al.], 1056
- nonlinear brain dynamics during emergence from sevoflurane anesthesia (CI) [Walling et al.], 927
- PET study of regional cerebral metabolism during general anesthesia with xenon (CI) [Rex et al.], 936
- to see or not to see (EV) [Lagasse], 1071
- to sleep, perchance to decode? (CO) [Veselis], 1278
- trends in anesthesia-related death and brain damage (CI) [Cheney et al.], 1081
- Wernicke encephalopathy as complication of parenteral nutrition diagnosed by MRI (CR) [Attard et al.], 847

**Breast cancer**

- effect of anesthetic technique on cancer recurrence or metastasis (CI) [Exadaktylos et al.], 660

**Breast-feeding**

- contrast imaging while breast-feeding (CO) [Camann et al.], 1277

**Bupivacaine**

- bupivacaine added to cardioplegia solution improves cardiac preservation (LI) [Ross et al.], 746
- CSF and spinal cord distribution of baclofen and bupivacaine during slow intrathecal infusion in pigs (PRA) [Bernards], 169
- effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 1. hyperalgesia, edema, and systemic cytokines (PRA) [Beloel et al.], 128
- effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 2. cytokines and p38 MAPKs in dorsal root ganglia and spinal cord (PRA) [Beloel et al.], 139
- lipid infusion resuscitation for local anesthetic toxicity (EV) [Weinberg], 7
- long QT1 mutation  $KCN1_{A344V}$  increases local anesthetic sensitivity of the slowly activating delayed rectifier potassium current (LI) [Siebrands et al.], 511
- successful use of a 20% lipid emulsion to resuscitate a patient after a presumed bupivacaine-related cardiac arrest (CR) [Rosenblatt et al.], 217

**Buprenorphine**

- naloxone reversal of buprenorphine-induced respiratory depression (CI) [van Dorp et al.], 51

**C*****Caenorhabditis elegans***

- of mice and nematodes (EV) [Forman], 442
- tail clamp responses in stomatin knockout mice compared with mobility assays in *Caenorhabditis elegans* during exposure to diethyl ether, halothane, and isoflurane (LI) [Sedensky et al.], 498

**Calcium and calcium channels**

- anesthetic preconditioning enhances  $Ca^{2+}$  handling and mechanical and metabolic function elicited by  $Na^+$ - $Ca^{2+}$  exchange inhibition in isolated hearts (LI) [An et al.], 541

- antagonistic actions of halothane and sevoflurane on spontaneous  $Ca^{2+}$  release in rat ventricular myocytes (LI) [Graham et al.], 58
- painful peripheral nerve injury decreases calcium current in axotomized sensory neurons (PRA) [McCallum et al.], 160
- volatile anesthetics, cyclic nucleotides, and  $Ca^{2+}$  influx in airway smooth muscle (LI) [Prakash et al.], 976

**Cancer**

- effect of anesthetic technique on breast cancer recurrence or metastasis (CI) [Exadaktylos et al.], 660
- ganglion impar neurolysis under CT guidance for recurrent vulva cancer (CO) [Ho et al.], 861

**Carbon dioxide**

- noninvasive, automated and continuous cardiac output monitoring by pulmonary capnodynamics (LI) [Peyton et al.], 72

**Carboxyhemoglobin**

- measurement of carboxyhemoglobin and methemoglobin by pulse oximetry (CI) [Barker et al.], 892

**Cardiac arrest**

- lipid infusion resuscitation for local anesthetic toxicity (EV) [Weinberg], 7
- successful use of a 20% lipid emulsion to resuscitate a patient after a presumed bupivacaine-related cardiac arrest (CR) [Rosenblatt et al.], 217

**Cardiac output**

- noninvasive, automated and continuous cardiac output monitoring by pulmonary capnodynamics (LI) [Peyton et al.], 72

**Cardiomyocytes**

- antagonistic actions of halothane and sevoflurane on spontaneous  $Ca^{2+}$  release in rat ventricular myocytes (LI) [Graham et al.], 58
- mechanism of cardiac sarcolemmal ATP-sensitive potassium channel activation by isoflurane in a heterologous expression system (LI) [Bienengraeber et al.], 534

**Cardiomyopathy**

- perianesthetic management of hypertrophic cardiomyopathy (CO) [Gallagher], 631
- Takotsubo cardiomyopathy after general anesthesia for eye surgery (CR) [Gavish et al.], 621

**Cardioprotection**

- bupivacaine added to cardioplegia solution improves cardiac preservation (LI) [Ross et al.], 746
- desflurane-induced preconditioning against myocardial infarction mediated by nitric oxide (LI) [Smul et al.], 719
- distinct roles for sarcolemmal and mitochondrial ATP-sensitive potassium channels in isoflurane-induced protection against oxidative stress (LI) [Marinovic et al.], 98
- improved postoperative outcomes associated with preoperative statin therapy (RA) [Hindler et al.], 1260
- $\kappa$ -opioid receptors mediate cardioprotection by remote preconditioning (LI) [Zhang et al.], 550
- molecular mechanisms transducing the anesthetic, analgesic, and organ-protective actions of xenon (RA) [Preckel et al.], 187
- statins: the next advance in cardioprotection? (EV) [Kersten et al.], 1079

**Cardiovascular surgery**

- association between increases in urinary neutrophil gelatinase-associated lipocalin and acute renal dysfunction after adult cardiac surgery (CI) [Wagener et al.], 485
- a case of severe diffuse venous thromboembolism associated with aprotinin and hypothermic circulatory arrest in a cardiac surgical patient with factor V Leiden (CR) [Shore-Lesserson et al.], 219
- delayed presentation of gastric perforation after transesophageal echocardiography for cardiac surgery (CR) [Soong et al.], 1273
- pain after cardiac surgery (PRA) [Lahtinen et al.], 794
- perioperative transfusion decisions in coronary artery disease patients undergoing coronary artery bypass surgery (CI) [Shehata et al.], 19
- systemic thromboses after cardiopulmonary bypass (CO) [Tanaka et al.], 428
- thoracic epidural analgesia after cardiac surgery (CO) [Pivalizza et al.], 854
- thoracic epidural anesthesia/analgesia after cardiac surgery (CO) [Scott et al.], 853



**Catheters**

- Ambesh maneuver during subclavian vein catheterization (CO) [Singh et al.], 1062
- preexisting neuropathy and nerve injury after ropivacaine administration through femoral nerve catheter (CR) [Blumenthal et al.], 1053
- retrograde blood flow in the brachial and axillary arteries during routine radial arterial catheter flushing (CI) [Murphy et al.], 492

**Cerebral glucose metabolism**

- during general anesthesia with xenon (CI) [Rex et al.], 936

**Cerebral state index**

- during propofol anesthesia (CI) [Jensen et al.], 28

**Cerebrospinal fluid (CSF)**

- CSF and spinal cord distribution of baclofen and bupivacaine during slow intrathecal infusion in pigs (PRA) [Bernards], 169

**Cervical spine**

- recurrent laryngeal nerve palsy after anterior cervical spine surgery (CI) [Audu et al.], 898

**Chronobiology**

- what sunrise might reveal (CO) [Lacassie], 1282

**Clinical trials**

- airway injuries after one-lung ventilation: comparison between double-lumen tube and endobronchial blocker (CI) [Knoll et al.], 471
- ambulatory continuous interscalene nerve blocks and time to discharge readiness after total shoulder arthroplasty (PRA) [Ilfeld et al.], 999
- analgesia after radical prostatectomy (PRA) [Gupta et al.], 784
- effect of gabapentin on postamputation pain (PRA) [Nikolajsen et al.], 1008
- multicenter clinical study of safety and activity of maleimide-polyethylene glycol-modified hemoglobin (Hemospan®) in patients undergoing major orthopedic surgery (CI) [Olofsson et al.], 1153
- protective ventilation influences systemic inflammation after esophagectomy (CI) [Michelet et al.], 911

**Clopidogrel**

- quantifying effect of antiplatelet therapy (CI) [Agarwal et al.], 676

**Closed Claims Project**

- to see or not to see (EV) [Lagasse], 1071
- trends in anesthesia-related death and brain damage (CI) [Cheney et al.], 1081

**Complications. See also Drug reactions/toxicity**

- airway injuries after one-lung ventilation: comparison between double-lumen tube and endobronchial blocker (CI) [Knoll et al.], 471
- anaphylaxis after albumin infusion in patient with ahaptoglobinemia (CR) [Shimode et al.], 425
- ASA postoperative visual loss registry (CI) [Lee et al.], 652
- association between increases in urinary neutrophil gelatinase-associated lipocalin and acute renal dysfunction after adult cardiac surgery (CI) [Wagener et al.], 485
- delayed presentation of gastric perforation after transesophageal echocardiography for cardiac surgery (CR) [Soong et al.], 1273
- epidural hematoma, infection, and neurologic injury in obstetric patients with epidural analgesia/anesthesia (RA) [Ruppen et al.], 394
- gender and post-dural puncture headache (RA) [Wu et al.], 613
- incidence and risk of adverse perioperative events among surgical patients taking traditional Chinese herbal medicines (CI) [Lee et al.], 454
- interscalene brachial plexus block, reducing risk of entering spinal canal (CI) [Sardesai et al.], 9
- intraneural injection during axillary block and nerve injury (PRA) [Bigeleisen], 779
- intraoperative tidal volume as risk factor for respiratory failure after pneumonectomy (CI) [Fernández-Perez et al.], 14
- is bilateral cerebral subdural hematoma more frequent after epidural anesthesia than spinal anesthesia? (CO) [Zeidan et al.], 1277
- long-term respiratory depression induced by intrathecal morphine (CO) [Scherens et al.], 431

- naloxone reversal of buprenorphine-induced respiratory depression (CI) [van Dorp et al.], 51
- opiate pharmacology of intrathecal granulomas (PRA) [Allen et al.], 590
- pharmacologic and functional characterization of malignant hyperthermia in the R163C RyR1 knock-in mouse (LI) [Yang et al.], 1164
- post-dural puncture bacterial meningitis (RA) [Baer], 381
- postoperative visual loss (EV) [Warner], 641
- postpneumonectomy pulmonary edema (EV) [Slinger], 2
- preexisting neuropathy and nerve injury after ropivacaine administration through femoral nerve catheter (CR) [Blumenthal et al.], 1053
- rare iatrogenic cause of upper gastrointestinal bleeding (CO) [Mul-lady et al.], 1063
- recurrent laryngeal nerve palsy after anterior cervical spine surgery (CI) [Audu et al.], 898
- regional anesthesia, intraneural injection, and nerve injury (EV) [Borgeat], 647
- retropharyngeal hematoma after stellate ganglion block (PRA) [Higa et al.], 1238
- risk factors for ventilator-associated pneumonia by *Pseudomonas aeruginosa* (CI) [Rello et al.], 709
- to see or not to see (EV) [Lagasse], 1071
- succinylcholine-induced hyperkalemia (CO) [Matthews], 430
- systemic thromboses after cardiopulmonary bypass (CO) [Tanaka et al.], 428
- Takotsubo cardiomyopathy after general anesthesia for eye surgery (CR) [Gavish et al.], 621
- time course and role of morphine dose and concentration in intrathecal granuloma formation in dogs (PRA) [Allen et al.], 581
- tongue necrosis and cleft after prolonged transesophageal echocardiography probe placement (CO) [Sriram et al.], 635
- trends in anesthesia-related death and brain damage (CI) [Cheney et al.], 1081
- Wernicke encephalopathy as complication of parenteral nutrition diagnosed by MRI (CR) [Attard et al.], 847

**Computed tomography (CT)**

- ganglion impar neurolysis under CT guidance for recurrent vulva cancer (CO) [Ho et al.], 861

**Congenital hyposensitivity to pain**

- anesthesia and (PRA) [Weingarten et al.], 338

**Consciousness**

- entwined mysteries of anesthesia and consciousness (SA) [Hamer-off], 400

**Continuing medical education (CME)**

- anesthesiologist's role in prevention of surgical site infections (CCC) [Mauermann et al.], 413 (CME erratum, 868)
- ASA postoperative visual loss registry (CI) [Lee et al.], 652
- development of a module for point-of-care charge capture and submission using an anesthesia information management system (EC) [Reich et al.], 179
- effects of dexmedetomidine on myocardial perfusion and cardiac function (CI) [Snafir et al.], 902
- improved postoperative outcomes associated with preoperative statin therapy (RA) [Hindler et al.], 1260
- instructions for obtaining journal CME credit, 231, 439, 639, 867, 1069, 1287
- vasopressin system: physiology and clinical strategies (RA) [Treschan et al.], 599

**Continuous positive airway pressure**

- effect of propofol anesthesia and continuous positive airway pressure on upper airway size and configuration in infants (CI) [Crawford et al.], 45

**Coronary artery bypass graft**

- myocardial ischemia revisited (CPR) [Slogoff et al.], 214
- perioperative transfusion decisions in coronary artery disease patients undergoing (CI) [Shehata et al.], 19

**Coronary circulation and myocardial ischemia**

- flumazenil mimics whereas midazolam abolishes ischemic preconditioning in a rabbit heart model of ischemia-reperfusion (LI) [Rivo et al.], 65
- myocardial ischemia revisited (CPR) [Slogoff et al.], 214

**Corticosteroids**

tumor lysis syndrome induced by dexamethasone (CO) [Chanimov et al.], 633

**Craniofacial surgery**

pharmacokinetics and pharmacodynamics of midazolam and metabolites in nonventilated infants after craniofacial surgery (CI) [Peeters et al.], 1135

**Crisis management**

debriefing during simulated crisis management (CI) [Savoldelli et al.], 279

**Critical care**

Bigatello, *Critical Care Handbook of the Massachusetts General Hospital, 4th Edition* (EM) [Pulido], 1286

blood glucose variability and short-term mortality in critically ill patients (CI) [Egi et al.], 244

blood glucose variability (EV) [Ouattara et al.], 233

Papadakos, Szalados, *Critical Care: A Volume in the Requisites in Anesthesiology Series* (EM) [Gajic], 636

performance of new anesthesia ventilators and ICU ventilators in pressure-support mode (LI) [Jaber et al.], 944

**Cyclooxygenase (COX) inhibitors**

modulation of remifentanyl-induced analgesia and postinfusion hyperalgesia by parecoxib (PRA) [Tröster et al.], 1016

**Cytokines**

effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 1. hyperalgesia, edema, and systemic cytokines (PRA) [Beloil et al.], 128

effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 2. cytokines and p38 MAPKs in dorsal root ganglia and spinal cord (PRA) [Beloil et al.], 139

role of a reduction of cytokine levels in isoflurane-mediated protection from endotoxin-induced lung injury (CO) [Eisenhut], 1280

**D****Desflurane**

desflurane-induced preconditioning against myocardial infarction mediated by nitric oxide (LI) [Smul et al.], 719

effects in senescent rat myocardium (LI) [Rozenberg et al.], 961

**Dexamethasone**

tumor lysis syndrome induced by dexamethasone (CO) [Chanimov et al.], 633

**Dexmedetomidine**

effects on myocardial perfusion and cardiac function (CI) [Snapir et al.], 902

phase I, two-center study of pharmacokinetics and pharmacodynamics of dexmedetomidine in children (CI) [Petroz et al.], 1098

**Diethyl ether**

tail clamp responses in stomatin knockout mice compared with mobility assays in *Caenorhabditis elegans* during exposure to diethyl ether, halothane, and isoflurane (LI) [Sedensky et al.], 498

**Diuretics**

influence of mannitol and furosemide, alone and in combination, on brain water content after fluid percussion injury (LI) [Todd et al.], 1176

**Dorsal root ganglion**

effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 2. cytokines and p38 MAPKs in dorsal root ganglia and spinal cord (PRA) [Beloil et al.], 139

painful peripheral nerve injury decreases calcium current in axotomized sensory neurons (PRA) [McCallum et al.], 160

permeability of injured and intact peripheral nerves and dorsal root ganglia (PRA) [Abram et al.], 146

**Drug interactions**

flexible interaction model for interactions of multiple anesthetics (LI) [Fidler et al.], 286

modulation of remifentanyl-induced analgesia and postinfusion hyperalgesia by parecoxib (PRA) [Tröster et al.], 1016

**Drug reactions/toxicity**

a case of severe diffuse venous thromboembolism associated with aprotinin and hypothermic circulatory arrest in a cardiac surgical patient with factor V Leiden (CR) [Shore-Lesserson et al.], 219

death with propofol use for nonprocedural sedation (SA) [Wysowski et al.], 1047

incidence and risk of adverse perioperative events among surgical patients taking traditional Chinese herbal medicines (CI) [Lee et al.], 454

is the dose-related reduction in succinylcholine-induced myalgia due to cointervention? (CO) [Kettler], 222

lidocaine neurotoxicity (PRA) [Haller et al.], 1024

lipid infusion resuscitation for local anesthetic toxicity (EV) [Weinberg], 7

mechanism of methoxyflurane nephrotoxicity

nephrotoxic metabolic pathway (LI) [Kharasch et al.], 726

nephrotoxic metabolites (LI) [Kharasch et al.], 737

successful use of a 20% lipid emulsion to resuscitate a patient after a presumed bupivacaine-related cardiac arrest (CR) [Rosenblatt et al.], 217

toxic damage to rabbit spinal cord after intrathecal administration of S(+)-ketamine (PRA) [Vranken et al.], 813

tumor lysis syndrome induced by dexamethasone (CO) [Chanimov et al.], 633

**Dural puncture**

gender and post-dural puncture headache (RA) [Wu et al.], 613

post-dural puncture bacterial meningitis (RA) [Baer], 381

**E****Echocardiography**

delayed presentation of gastric perforation after transesophageal echocardiography for cardiac surgery (CR) [Soong et al.], 1273

a new method for detecting the proximal aortic arch and innominate artery by transesophageal echocardiography (CO) [Li et al.], 226

pseudothrombus in aorta (CO) [Fukumoto et al.], 860

tongue necrosis and cleft after prolonged transesophageal echocardiography probe placement (CO) [Sriram et al.], 635

**Economics**

anesthesia preoperative medicine clinic: beyond surgery cancellations (CO) [Qiu et al.], 224

are your hospital operating rooms "efficient"? (EV) [Macario], 237  
automated anesthesia charge capture and submission (EV) [Abouleish et al.], 5

development of a module for point-of-care charge capture and submission using an anesthesia information management system (EC) [Reich et al.], 179

effects of an anesthesia preoperative medicine clinic (CO) [van Klei et al.], 224

statistical process control to monitor nonoperative time (EC) [Seim et al.], 370

value of preoperative clinic visits in identifying issues with potential impact on operating room efficiency (EC) [Correll et al.], 1254

**Editorial views**

all roads do not lead to Rome (EV) [Borgeat], 1

are your hospital operating rooms "efficient"? (EV) [Macario], 237  
asepsis during neuraxial instrumentation (EV) [Hepner], 241

automated anesthesia charge capture and submission (EV) [Abouleish et al.], 5

blood glucose variability (EV) [Ouattara et al.], 233

a century of arginine vasopressin research leading to new therapeutic strategies (EV) [Dünser et al.], 444

do the right thing (or do the market exclusivity thing?) (EV) [Fisher], 1074

forehead pulse oximetry (EV) [Eisenkraft], 1075

genetic variability of  $\mu$ -opioid receptor and postoperative morphine consumption (EV) [Landau], 235

herbal medicines and perioperative care (EV) [Moss et al.], 441

in hot pursuit (EV) [Hogan], 1077

if you prick us, do we not bleed? (EV) [Weiskopf], 873

- lipid infusion resuscitation for local anesthetic toxicity (EV) [Weinberg], 7
- of mice and nematodes (EV) [Forman], 442
- no patient left behind (EV) [Orkin et al.], 869
- postoperative visual loss (EV) [Warner], 641
- postpneumonectomy pulmonary edema (EV) [Slinger], 2
- predicting trouble in airway management (EV) [Yentis], 871
- pressure-support ventilation in the operating room (EV) [Tantawy et al.], 872
- regional anesthesia, intraneural injection, and nerve injury (EV) [Borgeat], 647
- research training in anesthesiology (EV) [Warner et al.], 446
- retrospective analysis (EV) [Ochroch et al.], 643
- to see or not to see (EV) [Lagasse], 1071
- statins: the next advance in cardioprotection? (EV) [Kersten et al.], 1079
- unraveling the mysteries of sleep-disordered breathing in children (EV) [Lerman], 645
- Endothelium**
- influence of endothelial glycocalyx degradation and surfactants on air embolism adhesion (LD) [Eckmann et al.], 1220
- Enflurane**
- actions on postsynaptic currents abolished by GABA<sub>A</sub> receptor  $\beta_3$ (N265M) point mutation (LD) [Drexler et al.], 297
- Epidemiology**
- survey of anesthesia-related mortality in France (CI) [Lienhart et al.], 1087
- trends in anesthesia-related death and brain damage (CI) [Cheney et al.], 1081
- Epidural anesthesia and analgesia**
- an error associated with an epidural drug infusion pump (CO) [Ghosh et al.], 226
- analgesia after radical prostatectomy (PRA) [Gupta et al.], 784
- efficacy of epidural block during general anesthesia (CO) [Larson et al.], 632
- epidural hematoma, infection, and neurologic injury in obstetric patients with (RA) [Ruppen et al.], 394
- is bilateral cerebral subdural hematoma more frequent after epidural anesthesia than spinal anesthesia? (CO) [Zeidan et al.], 1277
- low-dose intravenous ketamine potentiates epidural analgesia after thoracotomy (PRA) [Suzuki et al.], 111
- thoracic epidural analgesia after cardiac surgery (CO) [Pivalizza et al.], 854
- thoracic epidural analgesia in acute pancreatitis in rats (PRA) [Freise et al.], 354
- thoracic epidural anesthesia/analgesia after cardiac surgery (CO) [Scott et al.], 853
- Epinephrine**
- effect on extracellular lidocaine concentration in brain (LD) [Takahashi et al.], 984
- Equipment and technology**
- airway management with endotracheal tube *vs.* Combitube<sup>®</sup> during parabolic flights (CI) [Rabitsch et al.], 696
- an error associated with an epidural drug infusion pump (CO) [Ghosh et al.], 226
- light wand for esophageal identification (CO) [Singh et al.], 860
- performance of new anesthesia ventilators and ICU ventilators in pressure-support mode (LD) [Jaber et al.], 944
- ProSeal<sup>®</sup>* laryngeal mask airway size and fiberoptic endotracheal intubation (CO) [Colas et al.], 1283
- results of study comparing devices for lung isolation (CO) [Ng], 1060
- tongue necrosis and cleft after prolonged transesophageal echocardiography probe placement (CO) [Sriram et al.], 635
- tubing misload allows free flow event with smart intravenous infusion pump (CO) [Schroeder et al.], 434
- Yao, *Yao & Artusio's Anesthesiology: Problem-oriented Patient Management, 5th Edition for PDA* (EM) [Hennessey], 864
- ERK**
- inhibition of glutamatergic activation of extracellular signal-regulated protein kinases in hippocampal neurons by the intravenous anesthetic propofol (LD) [Kozinn et al.], 1182
- Errata**, 438, 866, 868, 1287
- Esophagectomy**
- protective ventilation influences systemic inflammation after (CI) [Michelet et al.], 911
- Eye surgery**
- key components of risk with ophthalmic anesthesia (CO) [Gayer], 859
- Takotsubo cardiomyopathy after general anesthesia for eye surgery (CR) [Gavish et al.], 621
- F**
- Femoral nerve catheter**
- preexisting neuropathy and nerve injury after ropivacaine administration through (CR) [Blumenthal et al.], 1053
- Fentanyl**
- recurrent hypoxia in rats during development and subsequent respiratory sensitivity to fentanyl (LD) [Moss et al.], 715
- supraspinal anesthesia (LD) [Jugovac et al.], 764
- Fluids and fluid management**
- effect of high- and low-molecular-weight low-substituted hydroxyethyl starch on blood coagulation during acute normovolemic hemodilution in pigs (LD) [Thyes et al.], 1228
- influence of mannitol and furosemide, alone and in combination, on brain water content after fluid percussion injury (LD) [Todd et al.], 1176
- successful use of a 20% lipid emulsion to resuscitate a patient after a presumed bupivacaine-related cardiac arrest (CR) [Rosenblatt et al.], 217
- Flumazenil**
- flumazenil mimics whereas midazolam abolishes ischemic preconditioning in a rabbit heart model of ischemia-reperfusion (LD) [Rivo et al.], 65
- Furosemide**
- influence of mannitol and furosemide, alone and in combination, on brain water content after fluid percussion injury (LD) [Todd et al.], 1176
- G**
- G proteins**
- volatile anesthetic effects on M<sub>3</sub> muscarinic receptor-G $\alpha_q$  coupling (LD) [Nakayama et al.], 313
- GABA and GABA receptors**
- enflurane actions on postsynaptic currents abolished by GABA<sub>A</sub> receptor  $\beta_3$ (N265M) point mutation (LD) [Drexler et al.], 297
- selective  $\gamma$ -aminobutyric acid type A receptor antagonism reverses isoflurane ischemic neuroprotection (LD) [Elsersy et al.], 81
- Gabapentin**
- effect on postamputation pain (PRA) [Nikolajsen et al.], 1008
- effect on tonic inhibitory conductance in hippocampal neurons (PRA) [Cheng et al.], 325
- Ganglion impar neurolysis**
- under CT guidance for recurrent vulva cancer (CO) [Ho et al.], 861
- Gas exchange**
- cardiorespiratory effects of proportional assist and pressure-support ventilation in patients with acute lung injury/ARDS (CI) [Kondili et al.], 703
- Gastric perforation**
- delayed presentation of gastric perforation after transesophageal echocardiography for cardiac surgery (CR) [Soong et al.], 1273
- Gastrointestinal bleeding**
- rare iatrogenic cause of gastrointestinal bleeding (CO) [Mullady et al.], 1063
- Gender**
- gender and post-dural puncture headache (RA) [Wu et al.], 613
- sex and memory formation during general anesthesia (CI) [Stonell et al.], 920
- strain and sex influence on pain sensitivity after plantar incision in mouse (PRA) [Banik et al.], 1246



**Genetics**

- enflurane actions on postsynaptic currents abolished by GABA<sub>A</sub> receptor  $\beta_3$ (N265M) point mutation (LI) [Drexler et al.], 297
- genetic variability of  $\mu$ -opioid receptor and postoperative morphine consumption (EV) [Landau], 235
- long QT1 mutation KCN1<sub>A344V</sub> increases local anesthetic sensitivity of the slowly activating delayed rectifier potassium current (LI) [Siebrands et al.], 511
- mechanism of cardiac sarcolemmal ATP-sensitive potassium channel activation by isoflurane in a heterologous expression system (LI) [Bienengraeber et al.], 534
- opioid receptor A118G polymorphism affects PCA morphine consumption after hysterectomy (PRA) [Chou et al.], 334

**Gitelman syndrome**

- anesthesia in patient with Gitelman syndrome (CO) [Bolton et al.], 1064

**Glutamate**

- inhibition of glutamatergic activation of extracellular signal-regulated protein kinases in hippocampal neurons by the intravenous anesthetic propofol (LI) [Kozinn et al.], 1182
- neuroprotection by sevoflurane during oxygen-glucose deprivation (LI) [Canas et al.], 990

**Granuloma**

- opioid pharmacology of intrathecal granulomas (PRA) [Allen et al.], 590
- time course and role of morphine dose and concentration in intrathecal granuloma formation in dogs (PRA) [Allen et al.], 581

**H****Halothane**

- antagonistic actions of halothane and sevoflurane on spontaneous Ca<sup>2+</sup> release in rat ventricular myocytes (LI) [Graham et al.], 58
- tail clamp responses in stomatin knockout mice compared with mobility assays in *Caenorhabditis elegans* during exposure to diethyl ether, halothane, and isoflurane (LI) [Sedensky et al.], 498
- volatile anesthetic effects on M<sub>3</sub> muscarinic receptor- $\alpha_4$  coupling (LI) [Nakayama et al.], 313

**Headache**

- gender and post-dural puncture headache (RA) [Wu et al.], 613

**Heart function and disease**

- anesthetic preconditioning enhances Ca<sup>2+</sup> handling and mechanical and metabolic function elicited by Na<sup>+</sup>-Ca<sup>2+</sup> exchange inhibition in isolated hearts (LI) [An et al.], 541
- antagonistic actions of halothane and sevoflurane on spontaneous Ca<sup>2+</sup> release in rat ventricular myocytes (LI) [Graham et al.], 58
- bupivacaine added to cardioplegia solution improves cardiac preservation (LI) [Ross et al.], 746
- cardiorespiratory effects of proportional assist and pressure-support ventilation in patients with acute lung injury/ARDS (CI) [Kondili et al.], 703
- effects of desflurane in senescent rat myocardium (LI) [Rozenberg et al.], 961
- effects of dexmedetomidine on myocardial perfusion and cardiac function (CI) [Snapir et al.], 902
- hypotension, heart rate variability, and altered autonomic function (CO) [Latson], 1281
- improved postoperative outcomes associated with preoperative statin therapy (RA) [Hindler et al.], 1260
- mechanism of cardiac sarcolemmal ATP-sensitive potassium channel activation by isoflurane in a heterologous expression system (LI) [Bienengraeber et al.], 534
- noninvasive, automated and continuous cardiac output monitoring by pulmonary capnodynamics (LI) [Peyton et al.], 72
- perianesthetic management of hypertrophic cardiomyopathy (CO) [Gallagher], 631
- perioperative transfusion decisions in coronary artery disease patients undergoing coronary artery bypass surgery (CI) [Shehata et al.], 19
- role of the  $\beta_1$ -adrenergic pathway in anesthetic and ischemic pre-

conditioning against myocardial infarction in the rabbit heart *in vivo* (LI) [Lange et al.], 503

statins: the next advance in cardioprotection? (EV) [Kersten et al.], 1079

Takotsubo cardiomyopathy after general anesthesia for eye surgery (CR) [Gavish et al.], 621

what sunrise might reveal (CO) [Lacassie], 1282

**Hematoma**

is bilateral cerebral subdural hematoma more frequent after epidural anesthesia than spinal anesthesia? (CO) [Zeidan et al.], 1277

retropharyngeal hematoma after stellate ganglion block (PRA) [Higa et al.], 1238

**Heme oxygenase 1**

heme oxygenase 1, nuclear factor E2-related factor 2, and nuclear factor  $\kappa$ B are involved in hemin inhibition of type 2 cationic amino acid transporter expression and L-arginine transport in stimulated macrophages (LI) [Tsai et al.], 1201

**Hemodynamics**

cardiorespiratory effects of proportional assist and pressure-support ventilation in patients with acute lung injury/ARDS (CI) [Kondili et al.], 703

noninvasive, automated and continuous cardiac output monitoring by pulmonary capnodynamics (LI) [Peyton et al.], 72

retrograde blood flow in the brachial and axillary arteries during routine radial arterial catheter flushing (CI) [Murphy et al.], 492

**Hemoglobin**

measurement of carboxyhemoglobin and methemoglobin by pulse oximetry (CI) [Barker et al.], 892

methylene blue treatment for methemoglobinemia and subsequent dramatic Bispectral Index reduction (CO) [Matisoff et al.], 228

multicenter clinical study of safety and activity of maleimide-polyethylene glycol-modified hemoglobin (Hemospan<sup>®</sup>) in patients undergoing major orthopedic surgery (CI) [Olofsson et al.], 1153

**Hemostasis**

antifibrinolytic therapy use to mitigate blood loss during staged complex major spine surgery: postoperative visual color changes after tranexamic acid administration (CR) [Cravens et al.], 1274

antifibrinolytics and allogeneic blood transfusion in orthopedic surgery (RA) [Zufferey et al.], 1034

**Herbal remedies**

herbal medicines and perioperative care (EV) [Moss et al.], 441

incidence and risk of adverse perioperative events among surgical patients taking traditional Chinese herbal medicines (CI) [Lee et al.], 454

**Histopathology**

opioid pharmacology of intrathecal granulomas (PRA) [Allen et al.], 590

time course and role of morphine dose and concentration in intrathecal granuloma formation in dogs (PRA) [Allen et al.], 581

toxic damage to rabbit spinal cord after intrathecal administration of S(+)-ketamine (PRA) [Vranken et al.], 813

**History**

Edison's anesthetic (CO) [Defalque et al.], 1063

Edridge, Sykes, Feldman, *Careers in Anesthesiology IX: Three Pioneer British Anaesthetists* (EM) [Southorn], 1285

Ether Monument (SA) [Ortega et al.], 838

Lai, *Pentothal Postcards* (EM) [Calicott], 229

the Mayo Clinic World War II short course and its effect on anesthesiology (SA) [Martin et al.], 209

methoxyflurane revisited (CPR) [Mazze], 843

myocardial ischemia revisited (CPR) [Slogoff et al.], 214

**Hydroxyethyl starch**

effect of high- and low-molecular-weight low-substituted hydroxyethyl starch on blood coagulation during acute normovolemic hemodilution in pigs (LI) [Thyes et al.], 1228

**Hyperalgesia**

effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 1. hyperalgesia, edema, and systemic cytokines (PRA) [Beloil et al.], 128

- modulation of remifentanyl-induced analgesia and postinfusion hyperalgesia by parecoxib (PRA) [Tröster et al.], 1016
- Hyperkalemia**  
succinylcholine-induced hyperkalemia(CO) [Matthews], 430
- Hypotension**  
hypotension, heart rate variability, and altered autonomic function (CO) [Latson], 1281  
what sunrise might reveal (CO) [Lacassie], 1282
- Hypothermia**  
a case of severe diffuse venous thromboembolism associated with aprotinin and hypothermic circulatory arrest in a cardiac surgical patient with factor V Leiden (CR) [Shore-Lesserson et al.], 219
- Hypoxemia**  
biologically variable ventilation improves oxygenation and respiratory mechanics during one-lung ventilation (LI) [McMullen et al.], 91  
recurrent hypoxemia in children and increased analgesic sensitivity to opiates (CI) [Brown et al.], 665
- Hypoxia**  
recurrent hypoxia in rats during development and subsequent respiratory sensitivity to fentanyl (LI) [Moss et al.], 715
- Hypoxia inducible factor-1**  
up-regulation of hypoxia inducible factor 1 $\alpha$  by isoflurane in Hep3B cells (LI) [Li et al.], 1211
- Hysterectomy**  
opioid receptor A118G polymorphism affects PCA morphine consumption after (PRA) [Chou et al.], 334
- I**
- Imaging and radiology**  
compression of subarachnoid space by engorged epidural venous plexus in (CR) [Takiguchi et al.], 848  
contrast imaging while breast-feeding (CO) [Camann et al.], 1277  
ganglion impar neurolysis under CT guidance for recurrent vulva cancer (CO) [Ho et al.], 861  
PET study of regional cerebral metabolism during general anesthesia with xenon (CI) [Rex et al.], 936  
third dimension to ultrasound-guided nerve blocks (CO) [Andreae], 856  
time course and role of morphine dose and concentration in intrathecal granuloma formation in dogs (PRA) [Allen et al.], 581  
ultrasound in not the only technique to visualized third occipital nerve blockade (CO) [Galiano et al.], 858  
Wernicke encephalopathy as complication of parenteral nutrition diagnosed by MRI (CR) [Attard et al.], 847
- Immunology and inflammation**  
effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 1. hyperalgesia, edema, and systemic cytokines (PRA) [Beloel et al.], 128  
effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 2. cytokines and p38 MAPKs in dorsal root ganglia and spinal cord (PRA) [Beloel et al.], 139  
midazolam inhibits proinflammatory mediators in the lipopolysaccharide-activated macrophage (LI) [Kim et al.], 105  
protective ventilation influences systemic inflammation after esophagectomy (CI) [Michelet et al.], 911
- Infection**  
anesthesiologist's role in prevention of surgical site infections (CCC) [Mauermann et al.], 413 (CME erratum, 868)  
epidural hematoma, infection, and neurologic injury in obstetric patients with epidural analgesia/anesthesia (RA) [Ruppen et al.], 394  
neurocysticercosis masquerading as eclampsia (CR) [Grondin et al.], 1056  
post-dural puncture bacterial meningitis (RA) [Baer], 381  
risk factors for ventilator-associated pneumonia by *Pseudomonas aeruginosa* (CI) [Rello et al.], 709
- Inhalation anesthesia and anesthetics**  
antagonistic actions of halothane and sevoflurane on spontaneous Ca<sup>2+</sup> release in rat ventricular myocytes (LI) [Graham et al.], 58  
desflurane-induced preconditioning against myocardial infarction mediated by nitric oxide (LI) [Smul et al.], 719  
distinct roles for sarcolemmal and mitochondrial ATP-sensitive potassium channels in isoflurane-induced protection against oxidative stress (LI) [Marinovic et al.], 98  
effects of desflurane in senescent rat myocardium (LI) [Rozenberg et al.], 961  
enflurane actions on postsynaptic currents abolished by GABA<sub>A</sub> receptor  $\beta_3$ (N265M) point mutation (LI) [Drexler et al.], 297  
extent and localization of changes in upper airway caliber with varying concentrations of sevoflurane in children (CI) [Crawford et al.], 1147  
implicit memory during isoflurane anesthesia (CO) [Lequeux et al.], 429  
inhibitory effects of sevoflurane on hyperreactive airway smooth muscle contractility in guinea pigs (LI) [Iwasaki et al.], 753  
isoflurane produces delayed preconditioning against spinal cord ischemic injury in rabbits (LI) [Sang et al.], 953  
mechanism of cardiac sarcolemmal ATP-sensitive potassium channel activation by isoflurane in a heterologous expression system (LI) [Bienengraeber et al.], 534  
mechanism of methoxyflurane nephrotoxicity  
nephrotoxic metabolic pathway (LI) [Kharasch et al.], 726  
nephrotoxic metabolites (LI) [Kharasch et al.], 737  
molecular mechanisms transducing the anesthetic, analgesic, and organ-protective actions of xenon (RA) [Preckel et al.], 187  
neuroprotection by sevoflurane during oxygen-glucose deprivation (LI) [Canas et al.], 990  
nonlinear brain dynamics during emergence from sevoflurane anesthesia (CI) [Walling et al.], 927  
opioid-volatile anesthetic synergy (CI) [Manyam et al.], 267  
PET study of regional cerebral metabolism during general anesthesia with xenon (CI) [Rex et al.], 936  
role of a reduction of cytokine levels in isoflurane-mediated protection from endotoxin-induced lung injury (CO) [Eisenhut], 1280  
selective  $\gamma$ -aminobutyric acid type A receptor antagonism reverses isoflurane ischemic neuroprotection (LI) [Elsersy et al.], 81  
tail clamp responses in stomatin knockout mice compared with mobility assays in *Caenorhabditis elegans* during exposure to diethyl ether, halothane, and isoflurane (LI) [Sedensky et al.], 498  
up-regulation of hypoxia inducible factor 1 $\alpha$  by isoflurane in Hep3B cells (LI) [Li et al.], 1211  
volatile anesthetic effects on M<sub>3</sub> muscarinic receptor-G $\alpha_q$  coupling (LI) [Nakayama et al.], 313
- Intracranial pressure**  
influence of mannitol and furosemide, alone and in combination, on brain water content after fluid percussion injury (LI) [Todd et al.], 1176
- Intrathecal anesthesia. See Spinal anesthesia and analgesia**
- Intravenous anesthesia and anesthetics**  
alfentanil dosage when inserting classic laryngeal mask airway (CI) [Yu et al.], 684  
cerebral state index during propofol anesthesia (CI) [Jensen et al.], 28  
closed-loop control of mean arterial blood pressure during surgery with alfentanil (CI) [Luginbühl et al.], 462  
death with propofol use for nonprocedural sedation (SA) [Wysowski et al.], 1047  
effect of propofol anesthesia and continuous positive airway pressure on upper airway size and configuration in infants (CI) [Crawford et al.], 45  
effects of ketamine and rocuronium and A-line<sup>®</sup> auditory evoked potential index, Bispectral Index, and spectral entropy monitor during steady state propofol and remifentanyl anesthesia (CI) [Verecke et al.], 1122  
inhibition of glutamatergic activation of extracellular signal-regulated protein kinases in hippocampal neurons by the intravenous anesthetic propofol (LI) [Kozinn et al.], 1182  
to sleep, perchance to decode? (CO) [Veselis], 1278  
tubing misload allows free flow event with smart intravenous infusion pump (CO) [Schroeder et al.], 434



**Intubation. See also Airway management**

- airway management with endotracheal tube *vs.* Combitube<sup>®</sup> during parabolic flights (CI) [Rabitsch et al.], 696
- improving success of retrograde tracheal intubation (CO) [Nadaraman], 855
- incidence and predictors of difficult and impossible mask ventilation (CI) [Kheterpal et al.], 885
- ProSeal*<sup>®</sup> laryngeal mask airway size and fiberoptic endotracheal intubation (CO) [Colas et al.], 1283
- recurrent laryngeal nerve palsy after anterior cervical spine surgery (CI) [Audu et al.], 898

**Ions and ion channels**

- anesthetic preconditioning enhances Ca<sup>2+</sup> handling and mechanical and metabolic function elicited by Na<sup>+</sup>-Ca<sup>2+</sup> exchange inhibition in isolated hearts (LI) [An et al.], 541
- antagonistic actions of halothane and sevoflurane on spontaneous Ca<sup>2+</sup> release in rat ventricular myocytes (LI) [Graham et al.], 58
- distinct roles for sarcolemmal and mitochondrial ATP-sensitive potassium channels in isoflurane-induced protection against oxidative stress (LI) [Marinovic et al.], 98
- long QT1 mutation KCN1<sub>A344V</sub> increases local anesthetic sensitivity of the slowly activating delayed rectifier potassium current (LI) [Siebrands et al.], 511
- mechanism of cardiac sarcolemmal ATP-sensitive potassium channel activation by isoflurane in a heterologous expression system (LI) [Bienengraeber et al.], 534
- painful peripheral nerve injury decreases calcium current in axotomized sensory neurons (PRA) [McCallum et al.], 160

**Ischemia**

- gray and white matter injury after spinal cord ischemia in rabbits (LI) [Kurita et al.], 305
- myocardial (*See Coronary circulation and myocardial ischemia*)
- role of the β<sub>1</sub>-adrenergic pathway in anesthetic and ischemic preconditioning against myocardial infarction in the rabbit heart *in vivo* (LI) [Lange et al.], 503

**Isoflurane**

- distinct roles for sarcolemmal and mitochondrial ATP-sensitive potassium channels in isoflurane-induced protection against oxidative stress (LI) [Marinovic et al.], 98
- implicit memory during anesthesia with (CO) [Lequeux et al.], 429
- isoflurane produces delayed preconditioning against spinal cord ischemic injury in rabbits (LI) [Sang et al.], 953
- mechanism of cardiac sarcolemmal ATP-sensitive potassium channel activation by isoflurane in a heterologous expression system (LI) [Bienengraeber et al.], 534
- role of a reduction of cytokine levels in isoflurane-mediated protection from endotoxin-induced lung injury (CO) [Eisenhut], 1280
- selective γ-aminobutyric acid type A receptor antagonism reverses isoflurane ischemic neuroprotection (LI) [Elsersy et al.], 81
- tail clamp responses in stomatin knockout mice compared with mobility assays in *Caenorhabditis elegans* during exposure to diethyl ether, halothane, and isoflurane (LI) [Sedensky et al.], 498
- up-regulation of hypoxia inducible factor 1α by isoflurane in Hep3B cells (LI) [Li et al.], 1211
- volatile anesthetic effects on M<sub>3</sub> muscarinic receptor-Gα<sub>q</sub> coupling (LI) [Nakayama et al.], 313

**J****Joint replacement surgery**

- ambulatory continuous interscalene nerve blocks and time to discharge readiness after total shoulder arthroplasty (PRA) [Ilfeld et al.], 999

**K****Ketamine**

- effects of ketamine and rocuronium and A-line<sup>®</sup> auditory evoked

- potential index, Bispectral Index, and spectral entropy monitor during steady state propofol and remifentanyl anesthesia (CI) [Verecke et al.], 1122
- low-dose intravenous ketamine potentiates epidural analgesia after thoracotomy (PRA) [Suzuki et al.], 111
- toxic damage to rabbit spinal cord after intrathecal administration of S(+)-ketamine (PRA) [Vranken et al.], 813

**Kidney function and disease**

- association between increases in urinary neutrophil gelatinase-associated lipocalin and acute renal dysfunction after adult cardiac surgery (CI) [Wagener et al.], 485
- mechanism of methoxyflurane nephrotoxicity
  - nephrotoxic metabolic pathway (LI) [Kharasch et al.], 726
  - nephrotoxic metabolites (LI) [Kharasch et al.], 737
- methoxyflurane revisited (CPR) [Mazze], 843

**L****Labor and delivery**

- epidural hematoma, infection, and neurologic injury in obstetric patients with epidural analgesia/anesthesia (RA) [Ruppen et al.], 394
- regional anesthesia for parturient with venous sinus thrombosis and placental abruption undergoing fractional heparin therapy (CR) [Holzman et al.], 423

**Laryngeal mask airway (LMA)**

- alfentanil dosage when inserting classic LMA (CI) [Yu et al.], 684
- Brimacombe, *Laryngeal Mask Anesthesia: Principles and Practice* (EM) [Ovassapian], 636
- predicting trouble in airway management (EV) [Yentis], 871
- ProSeal*<sup>®</sup> laryngeal mask airway size and fiberoptic endotracheal intubation (CO) [Colas et al.], 1283

**Lidocaine**

- effect of epinephrine on extracellular lidocaine concentration in brain (LI) [Takahashi et al.], 984
- neurotoxicity of (PRA) [Haller et al.], 1024

**Light wand**

- light wand for esophageal identification (CO) [Singh et al.], 860

**Lipid infusion**

- resuscitation for local anesthetic toxicity (EV) [Weinberg], 7
- successful use of a 20% lipid emulsion to resuscitate a patient after a presumed bupivacaine-related cardiac arrest (CR) [Rosenblatt et al.], 217

**Local anesthesia and anesthetics**

- effect of epinephrine on extracellular lidocaine concentration in brain (LI) [Takahashi et al.], 984
- effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 1. hyperalgesia, edema, and systemic cytokines (PRA) [Beloil et al.], 128
- effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 2. cytokines and p38 MAPKs in dorsal root ganglia and spinal cord (PRA) [Beloil et al.], 139
- lidocaine neurotoxicity (PRA) [Haller et al.], 1024
- lipid infusion resuscitation for local anesthetic toxicity (EV) [Weinberg], 7
- long QT1 mutation KCN1<sub>A344V</sub> increases local anesthetic sensitivity of the slowly activating delayed rectifier potassium current (LI) [Siebrands et al.], 511
- for spinal anesthesia, modifying baricity by temperature adjustment (PRA) [Heller et al.], 346
- successful use of a 20% lipid emulsion to resuscitate a patient after a presumed bupivacaine-related cardiac arrest (CR) [Rosenblatt et al.], 217

**Long QT syndrome**

- long QT1 mutation KCN1<sub>A344V</sub> increases local anesthetic sensitivity of the slowly activating delayed rectifier potassium current (LI) [Siebrands et al.], 511

**Lung function and disease**

- biologically variable ventilation improves oxygenation and respiratory mechanics during one-lung ventilation (LI) [McMullen et al.], 91

cardiorespiratory effects of proportional assist and pressure-support ventilation in patients with acute lung injury/ARDS (CI) [Kondili et al.], 703

decrease of functional residual capacity and ventilation homogeneity after neuromuscular blockade in anesthetized infants and children (CI) [von Ungern-Sternberg et al.], 670

intraoperative tidal volume as risk factor for respiratory failure after pneumonectomy (CI) [Fernández-Perez et al.], 14

long-term respiratory depression induced by intrathecal morphine (CO) [Scherens et al.], 431

mechanical ventilation with lower tidal volumes and positive end-expiratory pressure prevents alveolar coagulation (CI) [Choi et al.], 689

naloxone reversal of buprenorphine-induced respiratory depression (CI) [van Dorp et al.], 51

one-lung ventilation provided by anesthesiologists with minimal experience with thoracic anesthesia (CO) [Neustein], 1060

postpneumonectomy pulmonary edema (EV) [Slinger], 2

protective ventilation influences systemic inflammation after esophagectomy (CI) [Michelet et al.], 911

pulmonary responses to overventilation in late multiple organ failure (LI) [Uhlrig et al.], 1192

recurrent hypoxia in rats during development and subsequent respiratory sensitivity to fentanyl (LI) [Moss et al.], 715

results of study comparing devices for lung isolation (CO) [Ng], 1060

risk factors for ventilator-associated pneumonia by *Pseudomonas aeruginosa* (CI) [Rello et al.], 709

role of a reduction of cytokine levels in isoflurane-mediated protection from endotoxin-induced lung injury (CO) [Eisenhut], 1280

## M

### Macrophages

heme oxygenase 1, nuclear factor E2-related factor 2, and nuclear factor  $\kappa$ B are involved in hemin inhibition of type 2 cationic amino acid transporter expression and L-arginine transport in stimulated macrophages (LI) [Tsai et al.], 1201

midazolam inhibits proinflammatory mediators in the lipopolysaccharide-activated macrophage (LI) [Kim et al.], 105

### Magnetic resonance imaging (MRI)

compression of subarachnoid space by engorged epidural venous plexus in (CR) [Takiguchi et al.], 848

contrast imaging while breast-feeding (CO) [Camann et al.], 1277

time course and role of morphine dose and concentration in intrathecal granuloma formation in dogs (PRA) [Allen et al.], 581

ultrasound in not the only technique to visualize third occipital nerve blockade (CO) [Galiano et al.], 858

Wernicke encephalopathy as complication of parenteral nutrition diagnosed by MRI (CR) [Attard et al.], 847

### Malignant hyperthermia

in hot pursuit (EV) [Hogan], 1077

pharmacologic and functional characterization of malignant hyperthermia in the R163C RyR1 knock-in mouse (LI) [Yang et al.], 1164

### Mannitol

influence of mannitol and furosemide, alone and in combination, on brain water content after fluid percussion injury (LI) [Todd et al.], 1176

### Mechanical ventilation

airway injuries after one-lung ventilation: comparison between double-lumen tube and endobronchial blocker (CI) [Knoll et al.], 471

biologically variable ventilation improves oxygenation and respiratory mechanics during one-lung ventilation (LI) [McMullen et al.], 91

cardiorespiratory effects of proportional assist and pressure-support ventilation in patients with acute lung injury/ARDS (CI) [Kondili et al.], 703

mechanical ventilation with lower tidal volumes and positive end-expiratory pressure prevents alveolar coagulation (CI) [Choi et al.], 689

one-lung ventilation provided by anesthesiologists with minimal experience with thoracic anesthesia (CO) [Neustein], 1060

performance of new anesthesia ventilators and ICU ventilators in pressure-support mode (LI) [Jaber et al.], 944

pressure-support ventilation in the operating room (EV) [Tantawy et al.], 872

protective ventilation influences systemic inflammation after esophagectomy (CI) [Michelet et al.], 911

pulmonary responses to overventilation in late multiple organ failure (LI) [Uhlrig et al.], 1192

risk factors for ventilator-associated pneumonia by *Pseudomonas aeruginosa* (CI) [Rello et al.], 709

### Medical education. See also Continuing medical education

debriefing during simulated crisis management (CI) [Savoldelli et al.], 279

Dershwitz, Walz, *McGraw-Hill Specialty Board Review: Anesthesiology Examination & Board Review, 6th Edition* (EM) [Smith], 1067

the Mayo Clinic World War II short course and its effect on anesthesiology (SA) [Martin et al.], 209

research training in anesthesiology (EV) [Warner et al.], 446

Robertson, Lubarsky, Ranasinghe, *Anesthesiology Board Review, 2nd Edition* (EM) [Ritter], 1067

Royal College recommendations to improve academic anesthesia in the United Kingdom: how they compare with United States proposals (CO) [Pandit], 625

scoring system for measurement of resident performance on human patient simulator (CI) [Scavone et al.], 260

value of simulation training during anesthesia residency (CO) [Lighthall], 433

### Medical errors

error associated with an epidural drug infusion pump (CO) [Ghosh et al.], 226

### Medicolegal issues

to see or not to see (EV) [Lagasse], 1071

trends in anesthesia-related death and brain damage (CI) [Cheney et al.], 1081

### Memory

implicit memory during isoflurane anesthesia (CO) [Lequeux et al.], 429

sex and memory formation during general anesthesia (CI) [Stonell et al.], 920

### Menstrual cycle

different brain activation patterns to pain and pain-related unpleasantness during the menstrual cycle (PRA) [Choi et al.], 120

### Mepivacaine

long QT1 mutation KCN1A344V increases local anesthetic sensitivity of the slowly activating delayed rectifier potassium current (LI) [Siebrands et al.], 511

### Methemoglobin

measurement of carboxyhemoglobin and methemoglobin by pulse oximetry (CI) [Barker et al.], 892

methylene blue treatment for methemoglobinemia and subsequent dramatic Bispectral Index reduction (CO) [Matisoff et al.], 228

### Methoxyflurane

methoxyflurane revisited (CPR) [Mazze], 843

nephrotoxic metabolic pathway (LI) [Kharasch et al.], 726

nephrotoxic metabolites (LI) [Kharasch et al.], 737

### Microgravity conditions

airway management with endotracheal tube *vs.* Combitube<sup>®</sup> during parabolic flights (CI) [Rabitsch et al.], 696

### Midazolam

flumazenil mimics whereas midazolam abolishes ischemic preconditioning in a rabbit heart model of ischemia-reperfusion (LI) [Rivo et al.], 65

midazolam inhibits proinflammatory mediators in the lipopolysaccharide-activated macrophage (LI) [Kim et al.], 105

pharmacokinetics and pharmacodynamics of midazolam and metabolites in nonventilated infants after craniofacial surgery (CI) [Peeters et al.], 1135

supraspinal anesthesia (LI) [Jugovac et al.], 764

### Mitochondria

clinical implications of mitochondrial dysfunction (RA) [Muravchick et al.], 819

distinct roles for sarcolemmal and mitochondrial ATP-sensitive po-

- tassium channels in isoflurane-induced protection against oxidative stress (LD) [Marinovic et al.], 98
- Models and modeling**
- anesthetic preconditioning enhances  $\text{Ca}^{2+}$  handling and mechanical and metabolic function elicited by  $\text{Na}^+$ - $\text{Ca}^{2+}$  exchange inhibition in isolated hearts (LD) [An et al.], 541
- antagonistic actions of halothane and sevoflurane on spontaneous  $\text{Ca}^{2+}$  release in rat ventricular myocytes (LD) [Graham et al.], 58
- antinociception by spinal and systemic oxycodone (PRA) [Lemberg et al.], 801
- bupivacaine added to cardioplegia solution improves cardiac preservation (LD) [Ross et al.], 746
- CSF and spinal cord distribution of baclofen and bupivacaine during slow intrathecal infusion in pigs (PRA) [Bernards], 169
- desflurane-induced preconditioning against myocardial infarction mediated by nitric oxide (LD) [Smul et al.], 719
- distinct roles for sarcolemmal and mitochondrial ATP-sensitive potassium channels in isoflurane-induced protection against oxidative stress (LD) [Marinovic et al.], 98
- effect of high- and low-molecular-weight low-substituted hydroxyethyl starch on blood coagulation during acute normovolemic hemodilution in pigs (LD) [Thyes et al.], 1228
- effects of aging on nociception in mice (PRA) [Finkel et al.], 360
- effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 1. hyperalgesia, edema, and systemic cytokines (PRA) [Beloel et al.], 128
- effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 2. cytokines and p38 MAPKs in dorsal root ganglia and spinal cord (PRA) [Beloel et al.], 139
- effects of desflurane in senescent rat myocardium (LD) [Rozenberg et al.], 961
- enhancement of morphine analgesic effect with induction of  $\mu$ -opioid receptor endocytosis in rats (PRA) [Hashimoto et al.], 575
- flumazenil mimics whereas midazolam abolishes ischemic preconditioning in a rabbit heart model of ischemia-reperfusion (LD) [Rivo et al.], 65
- gabapentin effects on tonic inhibitory conductance in hippocampal neurons (PRA) [Cheng et al.], 325
- gray and white matter injury after spinal cord ischemia in rabbits (LD) [Kurita et al.], 305
- in hot pursuit (EV) [Hogan], 1077
- increased prostaglandin  $\text{E}_2$  release and activated Akt/ $\beta$ -catenin signaling pathway occur after opioid withdrawal in rat spinal cord (PRA) [Dunbar et al.], 154
- influence of endothelial glycocalyx degradation and surfactants on air embolism adhesion (LD) [Eckmann et al.], 1220
- influence of mannitol and furosemide, alone and in combination, on brain water content after fluid percussion injury (LD) [Todd et al.], 1176
- inhibitory effects of sevoflurane on hyperreactive airway smooth muscle contractility in pigs (LD) [Iwasaki et al.], 753
- isoflurane produces delayed preconditioning against spinal cord ischemic injury in rabbits (LD) [Sang et al.], 953
- of mice and nematodes (EV) [Forman], 442
- permeability of injured and intact peripheral nerves and dorsal root ganglia (PRA) [Abram et al.], 146
- pharmacologic and functional characterization of malignant hyperthermia in the R163C RyR1 knock-in mouse (LD) [Yang et al.], 1164
- pulmonary responses to overventilation in late multiple organ failure (LD) [Uhlrig et al.], 1192
- recurrent hypoxia in rats during development and subsequent respiratory sensitivity to fentanyl (LD) [Moss et al.], 715
- role of the  $\beta_1$ -adrenergic pathway in anesthetic and ischemic preconditioning against myocardial infarction in the rabbit heart *in vivo* (LD) [Lange et al.], 503
- selective  $\gamma$ -aminobutyric acid type A receptor antagonism reverses isoflurane ischemic neuroprotection (LD) [Elsersy et al.], 81
- sepsis attenuates muscle-relaxing effects of rocuronium in rats (LD) [Niiya et al.], 968
- strain and sex influence on pain sensitivity after plantar incision in mouse (PRA) [Banik et al.], 1246
- supraspinal anesthesia (LD) [Jugovac et al.], 764
- tail clamp responses in stomatin knockout mice compared with mobility assays in *Caenorhabditis elegans* during exposure to diethyl ether, halothane, and isoflurane (LD) [Sedensky et al.], 498
- thoracic epidural analgesia in acute pancreatitis in rats (PRA) [Freise et al.], 354
- time course and role of morphine dose and concentration in intrathecal granuloma formation in dogs (PRA) [Allen et al.], 581
- toxic damage to rabbit spinal cord after intrathecal administration of S(+)-ketamine (PRA) [Vranken et al.], 813
- Monitoring**
- effects of ketamine and rocuronium and A-line® auditory evoked potential index, Bispectral Index, and spectral entropy monitor during steady state propofol and remifentanyl anesthesia (CI) [Verecke et al.], 1122
- measurement of carboxyhemoglobin and methemoglobin by pulse oximetry (CI) [Barker et al.], 892
- neuromuscular blockade monitoring complicated by preoperative cosmetic use of botulinum toxin (CO) [Miller et al.], 862
- noninvasive, automated and continuous cardiac output monitoring by pulmonary capnodynamics (LD) [Peyton et al.], 72
- Morphine**
- genetic variability of  $\mu$ -opioid receptor and postoperative morphine consumption (EV) [Landau], 235
- long-term respiratory depression induced by intrathecal morphine (CO) [Scherens et al.], 431
- opioid receptor A118G polymorphism affects PCA morphine consumption after hysterectomy (PRA) [Chou et al.], 334
- time course and role of morphine dose and concentration in intrathecal granuloma formation in dogs (PRA) [Allen et al.], 581
- Mortality**
- blood glucose variability and short-term mortality in critically ill patients (CI) [Egi et al.], 244
- death with propofol use for nonprocedural sedation (SA) [Wysowski et al.], 1047
- to see or not to see (EV) [Lagasse], 1071
- survey of anesthesia-related mortality in France (CI) [Lienhart et al.], 1087
- trends in anesthesia-related death and brain damage (CI) [Cheney et al.], 1081
- Multiple organ failure**
- pulmonary responses to overventilation in late multiple organ failure (LD) [Uhlrig et al.], 1192
- Muscle**
- dose inflation when using precurarization (CO) [Donati], 222
- is the dose-related reduction in succinylcholine-induced myalgia due to cointervention? (CO) [Kettler], 222
- Myocardial infarction**
- desflurane-induced preconditioning against myocardial infarction mediated by nitric oxide (LD) [Smul et al.], 719
- role of the  $\beta_1$ -adrenergic pathway in anesthetic and ischemic preconditioning against myocardial infarction in the rabbit heart *in vivo* (LD) [Lange et al.], 503

## N

**Naloxone**

- naloxone reversal of buprenorphine-induced respiratory depression (CI) [van Dorp et al.], 51

**Nerve blocks**

- all roads do not lead to Rome (EV) [Borgeat], 1
- ambulatory continuous interscalene nerve blocks and time to discharge readiness after total shoulder arthroplasty (PRA) [Ilfeld et al.], 999
- effect of patient-controlled perineural analgesia on rehabilitation and pain after ambulatory orthopedic surgery (PRA) [Capdevila et al.], 566
- human skin microcirculation after brachial plexus block evaluated by wavelet transform of the laser Doppler flowmetry signal (CI) [Landsverk et al.], 478
- interscalene brachial plexus block, reducing risk of entering spinal canal (CI) [Sardesai et al.], 9



- intra-neural injection during axillary block and nerve injury (PRA) [Bigeleisen], 779
- Lennon, Horlocker, *Mayo Clinic Analgesic Pathway: Peripheral Nerve Blockade for Major Orthopedic Surgery* (EM) [Coursey et al.], 1066
- regional anesthesia, intra-neural injection, and nerve injury (EV) [Borgeat], 647
- retropharyngeal hematoma after stellate ganglion block (PRA) [Higa et al.], 1238
- third dimension to ultrasound-guided nerve blocks (CO) [Andreae], 856
- ultrasound is not the only technique to visualize third occipital nerve blockade (CO) [Galiano et al.], 858

**Nerve injury**

- epidural hematoma, infection, and neurologic injury in obstetric patients with epidural analgesia/anesthesia (RA) [Ruppen et al.], 394
- intra-neural injection during axillary block and nerve injury (PRA) [Bigeleisen], 779
- painful peripheral nerve injury decreases calcium current in axotomized sensory neurons (PRA) [McCallum et al.], 160
- permeability of injured and intact peripheral nerves and dorsal root ganglia (PRA) [Abram et al.], 146
- preexisting neuropathy and nerve injury after ropivacaine administration through femoral nerve catheter (CR) [Blumenthal et al.], 1053
- recurrent laryngeal nerve palsy after anterior cervical spine surgery (CI) [Audu et al.], 898
- regional anesthesia, intra-neural injection, and nerve injury (EV) [Borgeat], 647

**Neuromuscular transmission and blockade**

- decrease of functional residual capacity and ventilation homogeneity after neuromuscular blockade in anesthetized infants and children (CI) [von Ungern-Sternberg et al.], 670
- distinct pharmacologic properties of neuromuscular blocking agents on human neuronal nicotinic acetylcholine receptors (LI) [Jonsson et al.], 521
- dose inflation when using precurarization (CO) [Donati], 222
- first human exposure to Org 25969 (CO) [Nigrovic et al.], 427
- is the dose-related reduction in succinylcholine-induced myalgia due to co-intervention? (CO) [Kettler], 222
- neuromuscular blockade monitoring complicated by preoperative cosmetic use of botulinum toxin (CO) [Miller et al.], 862
- sepsis attenuates muscle-relaxing effects of rocuronium in rats (LI) [Niiya et al.], 968
- succinylcholine-induced hyperkalemia (CO) [Matthews], 430

**Neuroprotection**

- isoflurane produces delayed preconditioning against spinal cord ischemic injury in rabbits (LI) [Sang et al.], 953
- molecular mechanisms transducing the anesthetic, analgesic, and organ-protective actions of xenon (RA) [Preckel et al.], 187
- selective  $\gamma$ -aminobutyric acid type A receptor antagonism reverses isoflurane ischemic neuroprotection (LI) [Elsersy et al.], 81
- by sevoflurane during oxygen-glucose deprivation (LI) [Canas et al.], 990

**Neutrophil gelatinase-associated lipocalin**

- association between increases in urinary neutrophil gelatinase-associated lipocalin and acute renal dysfunction after adult cardiac surgery (CI) [Wagener et al.], 485

**Nitric oxide**

- desflurane-induced preconditioning against myocardial infarction mediated by nitric oxide (LI) [Smul et al.], 719
- inhaled nitric oxide for treatment of sickle cell stroke (CR) [Montero-Huerta et al.], 619

**Nitrous oxide**

- air bubble growth in water (CO) [Eckmann], 1059
- nitrous oxide and preconditioning (CO) [Pagel et al.], 630

**Nuclear factor E2-related factor 2**

- heme oxygenase 1, nuclear factor E2-related factor 2, and nuclear factor  $\kappa$ B are involved in hemin inhibition of type 2 cationic amino acid transporter expression and L-arginine transport in stimulated macrophages (LI) [Tsai et al.], 1201

**Nuclear factor  $\kappa$ B (NF- $\kappa$ B)**

- heme oxygenase 1, nuclear factor E2-related factor 2, and nuclear

- factor  $\kappa$ B are involved in hemin inhibition of type 2 cationic amino acid transporter expression and L-arginine transport in stimulated macrophages (LI) [Tsai et al.], 1201
- midazolam inhibits proinflammatory mediators in the lipopolysaccharide-activated macrophage (LI) [Kim et al.], 105

**O****Obstetric patients**

- epidural hematoma, infection, and neurologic injury in patients with epidural analgesia/anesthesia (RA) [Ruppen et al.], 394
- neurocysticercosis masquerading as eclampsia (CR) [Grondin et al.], 1056
- regional anesthesia for parturient with venous sinus thrombosis and placental abruption undergoing fractional heparin therapy (CR) [Holzman et al.], 423

**Obstructive sleep apnea**

- recurrent hypoxemia in children and increased analgesic sensitivity to opiates (CI) [Brown et al.], 665
- unraveling the mysteries of sleep-disordered breathing in children (EV) [Lerman], 645

**One-lung ventilation**

- airway injuries after: comparison between double-lumen tube and endobronchial blocker (CI) [Knoll et al.], 471
- biologically variable ventilation improves oxygenation and respiratory mechanics during (LI) [McMullen et al.], 91
- provided by anesthesiologists with minimal experience with thoracic anesthesia (CO) [Neustein], 1060
- results of study comparing devices for lung isolation (CO) [Ng], 1060

**Operating room management**

- anesthesia preoperative medicine clinic: beyond surgery cancellations (CO) [Qiu et al.], 224
- are your hospital operating rooms "efficient"? (EV) [Macario], 237
- effects of an anesthesia preoperative medicine clinic (CO) [van Klei et al.], 224
- no patient left behind (EV) [Orkin et al.], 869
- pressure-support ventilation in the operating room (EV) [Tantawy et al.], 872
- statistical process control to monitor nonoperative time (EC) [Seim et al.], 370
- teamwork in the operating room (CI) [Sexton et al.], 877
- value of preoperative clinic visits in identifying issues with potential impact on operating room efficiency (EC) [Correll et al.], 1254

**Ophthalmology**

- ASA postoperative visual loss registry (CI) [Lee et al.], 652
- key components of risk with ophthalmic anesthesia (CO) [Gayer], 859
- postoperative visual loss (EV) [Warner], 641
- Takotsubo cardiomyopathy after general anesthesia for eye surgery (CR) [Gavish et al.], 621

**Opioids and opioid receptors**

- antinociception by spinal and systemic oxycodone (PRA) [Lemberg et al.], 801
- effect of patient-controlled perineural analgesia on rehabilitation and pain after ambulatory orthopedic surgery (PRA) [Capdevila et al.], 566
- enhancement of morphine analgesic effect with induction of  $\mu$ -opioid receptor endocytosis in rats (PRA) [Hashimoto et al.], 575
- genetic variability of  $\mu$ -opioid receptor and postoperative morphine consumption (EV) [Landau], 235
- increased prostaglandin E<sub>2</sub> release and activated Akt/ $\beta$ -catenin signaling pathway occur after opioid withdrawal in rat spinal cord (PRA) [Dunbar et al.], 154
- $\kappa$ -opioid receptors mediate cardioprotection by remote preconditioning (LI) [Zhang et al.], 550
- long-term respiratory depression induced by intrathecal morphine (CO) [Scherens et al.], 431
- low-dose intravenous ketamine potentiates epidural analgesia after thoracotomy (PRA) [Suzuki et al.], 111
- modulation of remifentanyl-induced analgesia and postinfusion hyperalgesia by parecoxib (PRA) [Tröster et al.], 1016
- naloxone reversal of buprenorphine-induced respiratory depression (CI) [van Dorp et al.], 51

opiate pharmacology of intrathecal granulomas (PRA) [Allen et al.], 590  
 opioid receptor A118G polymorphism affects PCA morphine consumption after hysterectomy (PRA) [Chou et al.], 334  
 opioid-volatile anesthetic synergy (CI) [Manyam et al.], 267  
 postoperative left prefrontal repetitive transcranial magnetic stimulation reduces PCA use (PRA) [Borckardt et al.], 557  
 recurrent hypoxemia in children and increased analgesic sensitivity to opiates (CI) [Brown et al.], 665  
 recurrent hypoxia in rats during development and subsequent respiratory sensitivity to fentanyl (LI) [Moss et al.], 715  
 time course and role of morphine dose and concentration in intrathecal granuloma formation in dogs (PRA) [Allen et al.], 581

**Org 25969**

first human exposure to Org 25969 (CO) [Nigrovic et al.], 427

**Orthopedic surgery**

ambulatory continuous interscalene nerve blocks and time to discharge readiness after total shoulder arthroplasty (PRA) [Ilfeld et al.], 999  
 antifibrinolytics and allogeneic blood transfusion in (RA) [Zufferey et al.], 1034  
 effect of gabapentin on postamputation pain (PRA) [Nikolajsen et al.], 1008  
 effect of patient-controlled perineural analgesia on rehabilitation and pain after ambulatory orthopedic surgery (PRA) [Capdevila et al.], 566  
 Lennon, Horlocker, *Mayo Clinic Analgesic Pathway: Peripheral Nerve Blockade for Major Orthopedic Surgery* (EM) [Coursey et al.], 1066  
 multicenter clinical study of safety and activity of maleimide-polyethylene glycol-modified hemoglobin (Hemospan®) in patients undergoing major orthopedic surgery (CI) [Olofsson et al.], 1153

**Oxidative stress**

distinct roles for sarcolemmal and mitochondrial ATP-sensitive potassium channels in isoflurane-induced protection against oxidative stress (LI) [Marinovic et al.], 98  
 isoflurane produces delayed preconditioning against spinal cord ischemic injury in rabbits (LI) [Sang et al.], 953  
 neuroprotection by sevoflurane during oxygen-glucose deprivation (LI) [Canas et al.], 990

**Oxycodone**

antinociception by spinal and systemic oxycodone (PRA) [Lemberg et al.], 801

**Oxygenation**

biologically variable ventilation improves oxygenation and respiratory mechanics during one-lung ventilation (LI) [McMullen et al.], 91  
 forehead pulse oximetry (CI) [Agashe et al.], 1111  
 forehead pulse oximetry (EV) [Eisenkraft], 1075  
 measurement of carboxyhemoglobin and methemoglobin by pulse oximetry (CI) [Barker et al.], 892  
 recurrent hypoxemia in children and increased analgesic sensitivity to opiates (CI) [Brown et al.], 665  
 recurrent hypoxia in rats during development and subsequent respiratory sensitivity to fentanyl (LI) [Moss et al.], 715  
 splanchnic oxygen consumption is impaired during severe acute normovolemic anemia in anesthetized humans (CI) [Mathru et al.], 37

**P****p38 mitogen-activated protein kinase (MAPK)**

effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 2. cytokines and p38 MAPKs in dorsal root ganglia and spinal cord (PRA) [Beloil et al.], 139  
 in lidocaine neurotoxicity (PRA) [Haller et al.], 1024  
 midazolam inhibits proinflammatory mediators in the lipopolysaccharide-activated macrophage (LI) [Kim et al.], 105

**Pain, neuropathic**

long-term respiratory depression induced by intrathecal morphine for (CO) [Scherens et al.], 431

painful peripheral nerve injury decreases calcium current in axotomized sensory neurons (PRA) [McCallum et al.], 160

**Pain, postoperative**

after cardiac surgery (PRA) [Lahtinen et al.], 794  
 ambulatory continuous interscalene nerve blocks and time to discharge readiness after total shoulder arthroplasty (PRA) [Ilfeld et al.], 999  
 analgesia after radical prostatectomy (PRA) [Gupta et al.], 784  
 effect of gabapentin on postamputation pain (PRA) [Nikolajsen et al.], 1008  
 effect of patient-controlled perineural analgesia on rehabilitation and pain after ambulatory orthopedic surgery (PRA) [Capdevila et al.], 566  
 genetic variability of  $\mu$ -opioid receptor and postoperative morphine consumption (EV) [Landau], 235  
 postoperative left prefrontal repetitive transcranial magnetic stimulation reduces PCA use (PRA) [Borckardt et al.], 557  
 thoracic epidural analgesia after cardiac surgery (CO) [Pivalizza et al.], 854  
 thoracic epidural anesthesia/analgesia after cardiac surgery (CO) [Scott et al.], 853

**Pain management**

anesthesia and patients with congenital hyposensitivity to pain (PRA) [Weingarten et al.], 338  
 antinociception by spinal and systemic oxycodone (PRA) [Lemberg et al.], 801  
 Edison's anesthetic (CO) [Defalque et al.], 1063  
 enhancement of morphine analgesic effect with induction of  $\mu$ -opioid receptor endocytosis in rats (PRA) [Hashimoto et al.], 575  
 ganglion impar neurolysis under CT guidance for recurrent vulva cancer (CO) [Ho et al.], 861  
 low-dose intravenous ketamine potentiates epidural analgesia after thoracotomy (PRA) [Suzuki et al.], 111

**Pain mechanisms**

different brain activation patterns to pain and pain-related unpleasantness during the menstrual cycle (PRA) [Choi et al.], 120  
 effects of aging on nociception in mice (PRA) [Finkel et al.], 360  
 effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 1. hyperalgesia, edema, and systemic cytokines (PRA) [Beloil et al.], 128  
 effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 2. cytokines and p38 MAPKs in dorsal root ganglia and spinal cord (PRA) [Beloil et al.], 139

**Pain sensitivity**

anesthesia and patients with congenital hyposensitivity to pain (PRA) [Weingarten et al.], 338  
 strain and sex influence on pain sensitivity after plantar incision in mouse (PRA) [Banik et al.], 1246

**Pancreatitis, acute**

thoracic epidural analgesia in rats (PRA) [Freise et al.], 354

**Paracetamol**

modulation of remifentanyl-induced analgesia and postinfusion hyperalgesia by (PRA) [Tröster et al.], 1016

**Patient-controlled analgesia (PCA)**

analgesia after radical prostatectomy (PRA) [Gupta et al.], 784  
 effect of patient-controlled perineural analgesia on rehabilitation and pain after ambulatory orthopedic surgery (PRA) [Capdevila et al.], 566  
 opioid receptor A118G polymorphism affects PCA morphine consumption after hysterectomy (PRA) [Chou et al.], 334  
 postoperative left prefrontal repetitive transcranial magnetic stimulation reduces PCA use (PRA) [Borckardt et al.], 557  
 thoracic epidural analgesia after cardiac surgery (CO) [Pivalizza et al.], 854  
 thoracic epidural anesthesia/analgesia after cardiac surgery (CO) [Scott et al.], 853

**Pediatric patients**

decrease of functional residual capacity and ventilation homogeneity after neuromuscular blockade in anesthetized infants and children (CI) [von Ungern-Sternberg et al.], 670  
 do the right thing (or do the market exclusivity thing?) (EV) [Fisher], 1074  
 effect of propofol anesthesia and continuous positive airway pres-

- sure on upper airway size and configuration in infants (CI) [Crawford et al.], 45
- extent and localization of changes in upper airway caliber with varying concentrations of sevoflurane in children (CI) [Crawford et al.], 1147
- inhaled nitric oxide for treatment of sickle cell stroke (CR) [Montero-Huerta et al.], 619
- Motoyama, Davis, *Smith's Anesthesia for Infants and Children, 7th Edition* (EM) [Flick], 863
- pharmacokinetics and pharmacodynamics of midazolam and metabolites in nonventilated infants after craniofacial surgery (CI) [Peeters et al.], 1135
- phase I, two-center study of pharmacokinetics and pharmacodynamics of dexmedetomidine in children (CI) [Petroz et al.], 1098
- recurrent hypoxemia in children and increased analgesic sensitivity to opiates (CI) [Brown et al.], 665
- unraveling the mysteries of sleep-disordered breathing in children (EV) [Lerman], 645
- Pentobarbital**
- supraspinal anesthesia (LI) [Jugovac et al.], 764
- Personal digital assistant (PDA)**
- Yao, Yao & Artusio's *Anesthesiology: Problem-oriented Patient Management, 5th Edition for PDA* (EM) [Hennessey], 864
- Pharmacokinetics and pharmacodynamics**
- antinociception by spinal and systemic oxycodone (PRA) [Lemberg et al.], 801
- dexmedetomidine in children (CI) [Petroz et al.], 1098
- do the right thing (or do the market exclusivity thing?) (EV) [Fisher], 1074
- first human exposure to Org 25969 (CO) [Nigrovic et al.], 427
- flexible interaction model for interactions of multiple anesthetics (LI) [Fidler et al.], 286
- midazolam and metabolites in nonventilated infants after craniofacial surgery (CI) [Peeters et al.], 1135
- opioid-volatile anesthetic synergy (CI) [Manyam et al.], 267
- Stoelting, Hillier, *Pharmacology & Physiology in Anesthetic Practice, 4th Edition* (EM) [Brentjens], 864
- Woerlee, *Gerry's Real World Guide to Pharmacokinetics and Other Things* (EM) [Wright], 436
- Pneumonectomy**
- intraoperative tidal volume as risk factor for respiratory failure after (CI) [Fernández-Perez et al.], 14
- pulmonary edema after (EV) [Slinger], 2
- Pneumonia**
- risk factors for ventilator-associated pneumonia by *Pseudomonas aeruginosa* (CI) [Rello et al.], 709
- Positron emission tomography (PET)**
- regional cerebral metabolism during general anesthesia with xenon (CI) [Rex et al.], 936
- Potassium and potassium channels**
- distinct roles for sarcolemmal and mitochondrial ATP-sensitive potassium channels in isoflurane-induced protection against oxidative stress (LI) [Marinovic et al.], 98
- long QT1 mutation  $KCN1_{A344V}$  increases local anesthetic sensitivity of the slowly activating delayed rectifier potassium current (LI) [Siebrands et al.], 511
- mechanism of cardiac sarcolemmal ATP-sensitive potassium channel activation by isoflurane in a heterologous expression system (LI) [Bienengraeber et al.], 534
- succinylcholine-induced hyperkalemia (CO) [Matthews], 430
- Practice guidelines**
- perioperative blood transfusion and adjuvant therapies (PG) [ASA Task Force], 198
- Preconditioning**
- anesthetic preconditioning enhances  $Ca^{2+}$  handling and mechanical and metabolic function elicited by  $Na^+$ - $Ca^{2+}$  exchange inhibition in isolated hearts (LI) [An et al.], 541
- clinical implications of mitochondrial dysfunction (RA) [Muravchick et al.], 819
- desflurane-induced preconditioning against myocardial infarction mediated by nitric oxide (LI) [Smul et al.], 719
- flumazenil mimics whereas midazolam abolishes ischemic preconditioning in a rabbit heart model of ischemia-reperfusion (LI) [Rivo et al.], 65
- isoflurane produces delayed preconditioning against spinal cord ischemic injury in rabbits (LI) [Sang et al.], 953
- $\kappa$ -opioid receptors mediate cardioprotection by remote preconditioning (LI) [Zhang et al.], 550
- nitrous oxide and preconditioning (CO) [Pagel et al.], 630
- role of the  $\beta_1$ -adrenergic pathway in anesthetic and ischemic preconditioning against myocardial infarction in the rabbit heart *in vivo* (LI) [Lange et al.], 503
- Pregnancy and lactation**
- compression of subarachnoid space by engorged epidural venous plexus in pregnancy (CR) [Takiguchi et al.], 848
- contrast imaging while breast-feeding (CO) [Camann et al.], 1277
- neurocysticercosis masquerading as eclampsia (CR) [Grondin et al.], 1056
- Preoxygenation**
- good ideas deserve repeating (CO) [Baum], 852
- Propofol**
- cerebral state index during propofol anesthesia (CI) [Jensen et al.], 28
- death with propofol use for nonprocedural sedation (SA) [Wysowski et al.], 1047
- effect of propofol anesthesia and continuous positive airway pressure on upper airway size and configuration in infants (CI) [Crawford et al.], 45
- effects of ketamine and rocuronium and A-line® auditory evoked potential index, Bispectral Index, and spectral entropy monitor during steady state propofol and remifentanyl anesthesia (CI) [Verecke et al.], 1122
- inhibition of glutamatergic activation of extracellular signal-regulated protein kinases in hippocampal neurons by the intravenous anesthetic propofol (LI) [Kozinn et al.], 1182
- to sleep, perchance to decode? (CO) [Veselis], 1278
- supraspinal anesthesia (LI) [Jugovac et al.], 764
- Prostaglandins**
- increased prostaglandin  $E_2$  release and activated Akt/ $\beta$ -catenin signaling pathway occur after opioid withdrawal in rat spinal cord (PRA) [Dunbar et al.], 154
- Prostatectomy**
- postoperative analgesia after (PRA) [Gupta et al.], 784
- Protein balance**
- postoperative amino acid infusion and protein balance (CI) [Donatelli et al.], 253
- Pulmonary edema**
- postpneumonectomy pulmonary edema (EV) [Slinger], 2
- Pulse oximetry**
- forehead pulse oximetry (CI) [Agashe et al.], 1111
- forehead pulse oximetry (EV) [Eisenkraft], 1075
- measurement of carboxyhemoglobin and methemoglobin by pulse oximetry (CI) [Barker et al.], 892

## R

**Radial artery catheter**

retrograde blood flow in the brachial and axillary arteries during routine flushing of (CI) [Murphy et al.], 492

**Reactive oxygen species**

distinct roles for sarcolemmal and mitochondrial ATP-sensitive potassium channels in isoflurane-induced protection against oxidative stress (LI) [Marinovic et al.], 98

isoflurane produces delayed preconditioning against spinal cord ischemic injury in rabbits (LI) [Sang et al.], 953

neuroprotection by sevoflurane during oxygen-glucose deprivation (LI) [Canas et al.], 990

**Regional anesthesia and anesthetics**

all roads do not lead to Rome (EV) [Borgeat], 1

effect of anesthetic technique on breast cancer recurrence or metastasis (CI) [Exadaktylos et al.], 660

interscalene brachial plexus block, reducing risk of entering spinal canal (CI) [Sardesai et al.], 9

key components of risk with ophthalmic anesthesia (CO) [Gayer], 859

for parturient with venous sinus thrombosis and placental abruption undergoing fractional heparin therapy (CR) [Holzman et al.], 423



- preexisting neuropathy and nerve injury after ropivacaine administration through femoral nerve catheter (CR) [Blumenthal et al.], 1053
- regional anesthesia, intraneural injection, and nerve injury (EV) [Borgeat], 647
- Remifentanyl**
- effects of ketamine and rocuronium and A-line® auditory evoked potential index, Bispectral Index, and spectral entropy monitor during steady state propofol and remifentanyl anesthesia (CI) [Vereecke et al.], 1122
  - modulation of remifentanyl-induced analgesia and postinfusion hyperalgesia by parecoxib (PRA) [Tröster et al.], 1016
  - opioid-volatile anesthetic synergy (CI) [Manyam et al.], 267
- Research**
- anesthesiologist scientist: endangered species (CO) [Gelman], 624
  - integrate our international anesthesia research protocol (CO) [Andreae], 624
  - Nicholas P. Franks, Ph.D., recipient of 2006 Excellence in Research Award [Evers], 649
  - research training in anesthesiology (EV) [Warner et al.], 446
  - retrospective analysis (EV) [Ochroch et al.], 643
  - Royal College recommendations to improve academic anesthesia in the United Kingdom: how they compare with United States proposals (CO) [Pandit], 625
- Residency training. See also Medical education**
- debriefing during simulated crisis management (CI) [Savoldelli et al.], 279
  - scoring system for measurement of resident performance on human patient simulator (CI) [Scavone et al.], 260
  - Shaw, *The Ultimate Guide to Finding the Right Job after Residency* (EM) [Lunn], 1066
  - value of simulation training (CO) [Lighthall], 433
- Respiratory depression**
- long-term, induced by intrathecal morphine (CO) [Scherens et al.], 431
  - naloxone reversal of buprenorphine-induced respiratory depression (CI) [van Dorp et al.], 51
- Respiratory failure**
- postpneumectomy, intraoperative tidal volume as risk factor for (CI) [Fernández-Perez et al.], 14
- Resuscitation**
- lipid infusion resuscitation for local anesthetic toxicity (EV) [Weinberg], 7
  - successful use of a 20% lipid emulsion to resuscitate a patient after a presumed bupivacaine-related cardiac arrest (CR) [Rosenblatt et al.], 217
- Review articles**
- antifibrinolytics and allogeneic blood transfusion in orthopedic surgery (RA) [Zufferey et al.], 1034
  - clinical implications of mitochondrial dysfunction (RA) [Muravchick et al.], 819
  - epidural hematoma, infection, and neurologic injury in obstetric patients with epidural analgesia/anesthesia (RA) [Ruppen et al.], 394
  - gender and post-dural puncture headache (RA) [Wu et al.], 613
  - improved postoperative outcomes associated with preoperative statin therapy (RA) [Hindler et al.], 1260
  - molecular mechanisms transducing the anesthetic, analgesic, and organ-protective actions of xenon (RA) [Preckel et al.], 187
  - post-dural puncture bacterial meningitis (RA) [Baer], 381
  - vasopressin system: physiology and clinical strategies (RA) [Treschan et al.], 599
- Reviews of educational material**
- Bacon, McGoldrick, Lema, *The American Society of Anesthesiologists: A Century of Challenges and Progress* (EM) [Waisel], 863
  - Barash, *Clinical Anesthesia, 5th Edition* (EM) [Rosenfeld], 1284
  - Bigatello, *Critical Care Handbook of the Massachusetts General Hospital, 4th Edition* (EM) [Pulido], 1286
  - Brimacombe, *Laryngeal Mask Anesthesia: Principles and Practice* (EM) [Ovassapian], 636
  - Dershwitz, Walz, *McGraw-Hill Specialty Board Review: Anesthesiology Examination & Board Review, 6th Edition* (EM) [Smith], 1067
  - Edridge, Sykes, Feldman, *Careers in Anesthesiology IX: Three Pioneer British Anaesthetists* (EM) [Southorn], 1285
  - Fleisher, *Anesthesia and Uncommon Diseases, 5th Edition* (EM) [Ramakrishna], 1284
  - Lai, *Pentothal Postcards* (EM) [Calicott], 229
  - Lennon, Horlocker, *Mayo Clinic Analgesic Pathway: Peripheral Nerve Blockade for Major Orthopedic Surgery* (EM) [Courtney et al.], 1066
  - Motoyama, Davis, *Smith's Anesthesia for Infants and Children, 7th Edition* (EM) [Flick], 863
  - Papadakos, Szalados, *Critical Care: A Volume in the Requisites in Anesthesiology Series* (EM) [Gajic], 636
  - Robertson, Lubarsky, Ranasinghe, *Anesthesiology Board Review, 2nd Edition* (EM) [Ritter], 1067
  - Shaw, Riedel, Fields, Feeley, *Acute Care of the Cancer Patient* (EM) [Kor], 436
  - Shaw, *The Ultimate Guide to Finding the Right Job after Residency* (EM) [Lunn], 1066
  - Stoelting, Hillier, *Pharmacology & Physiology in Anesthetic Practice, 4th Edition* (EM) [Brentjens], 864
  - Woerlee, *Gerry's Real World Guide to Pharmacokinetics and Other Things* (EM) [Wright], 436
  - Yao, *Yao & Artusio's Anesthesiology: Problem-oriented Patient Management, 5th Edition for PDA* (EM) [Hennessey], 864
  - Yentis, *A View from the Head End* (EM) [Ererth], 229
- Rocuronium**
- sepsis attenuates muscle-relaxing effects in rats (LI) [Niiya et al.], 968
- Ropivacaine**
- long QT1 mutation KCN1<sub>A344V</sub> increases local anesthetic sensitivity of the slowly activating delayed rectifier potassium current (LI) [Siebrands et al.], 511
  - preexisting neuropathy and nerve injury after ropivacaine administration through femoral nerve catheter (CR) [Blumenthal et al.], 1053
- Ryanodine receptor**
- pharmacologic and functional characterization of malignant hyperthermia in the R163C RyR1 knock-in mouse (LI) [Yang et al.], 1164
- S**
- Safety Attitudes Questionnaire**
- no patient left behind (EV) [Orkin et al.], 869
  - teamwork in the operating room (CI) [Sexton et al.], 877
- Safety issues**
- all roads do not lead to Rome (EV) [Borgeat], 1
  - interscalene brachial plexus block, reducing risk of entering spinal canal (CI) [Sardesai et al.], 9
  - multicenter clinical study of safety and activity of maleimide-polyethylene glycol-modified hemoglobin (Hemospan®) in patients undergoing major orthopedic surgery (CI) [Olofsson et al.], 1153
  - to see or not to see (EV) [Lagasse], 1071
  - survey of anesthesia-related mortality in France (CI) [Lienhart et al.], 1087
  - trends in anesthesia-related death and brain damage (CI) [Cheney et al.], 1081
  - tubing misload allows free flow event with smart intravenous infusion pump (CO) [Schroeder et al.], 434
- Sepsis**
- attenuation of muscle-relaxing effects of rocuronium in rats by sepsis (LI) [Niiya et al.], 968
- Sevoflurane**
- antagonistic actions of halothane and sevoflurane on spontaneous Ca<sup>2+</sup> release in rat ventricular myocytes (LI) [Graham et al.], 58
  - extent and localization of changes in upper airway caliber with varying concentrations of sevoflurane in children (CI) [Crawford et al.], 1147
  - inhibitory effects on hyperreactive airway smooth muscle contractility in guinea pigs (LI) [Iwasaki et al.], 753
  - neuroprotection during oxygen-glucose deprivation (LI) [Canas et al.], 990

- nonlinear brain dynamics during emergence from sevoflurane anesthesia (CI) [Walling et al.], 927
- opioid-volatile anesthetic synergy (CI) [Manyam et al.], 267
- volatile anesthetic effects on M<sub>3</sub> muscarinic receptor-Gα<sub>q</sub> coupling (LI) [Nakayama et al.], 313
- Shoulder**
- ambulatory continuous interscalene nerve blocks and time to discharge readiness after total shoulder arthroplasty (PRA) [Ilfeld et al.], 999
- Sickle cell disease**
- inhaled nitric oxide for treatment of sickle cell stroke (CR) [Montero-Huerta et al.], 619
- Signal transduction**
- increased prostaglandin E<sub>2</sub> release and activated Akt/β-catenin signaling pathway occur after opioid withdrawal in rat spinal cord (PRA) [Dunbar et al.], 154
- inhibition of glutamatergic activation of extracellular signal-regulated protein kinases in hippocampal neurons by the intravenous anesthetic propofol (LI) [Kozinn et al.], 1182
- in lidocaine neurotoxicity (PRA) [Haller et al.], 1024
- Simulation training**
- debriefing during simulated crisis management (CI) [Savoldelli et al.], 279
- scoring system for measurement of resident performance on human patient simulator (CI) [Scavone et al.], 260
- value during anesthesia residency (CO) [Lighthall], 433
- Skin microcirculation**
- after brachial plexus block evaluated by wavelet transform of the laser Doppler flowmetry signal (CI) [Landsverk et al.], 478
- Sleep-disordered breathing**
- in children, unraveling the mysteries of (EV) [Lerman], 645
- recurrent hypoxemia in children and increased analgesic sensitivity to opiates (CI) [Brown et al.], 665
- Smooth muscle, airway**
- inhibitory effects of sevoflurane on hyperreactive airway smooth muscle contractility in guinea pigs (LI) [Iwasaki et al.], 753
- volatile anesthetics, cyclic nucleotides, and Ca<sup>2+</sup> influx in (LI) [Prakash et al.], 976
- Sodium and sodium channels**
- anesthetic preconditioning enhances Ca<sup>2+</sup> handling and mechanical and metabolic function elicited by Na<sup>+</sup>-Ca<sup>2+</sup> exchange inhibition in isolated hearts (LI) [An et al.], 541
- Special articles**
- death with propofol use for nonprocedural sedation (SA) [Wysowski et al.], 1047
- entwined mysteries of anesthesia and consciousness (SA) [Hameroff], 400
- history of the Ether Monument (SA) [Ortega et al.], 838
- the Mayo Clinic World War II short course and its effect on anesthesiology (SA) [Martin et al.], 209
- practice guidelines for perioperative blood transfusion and adjuvant therapies (SA) [ASA Task Force], 198
- Spinal anesthesia and analgesia**
- antinociception by spinal and systemic oxycodone (PRA) [Lemberg et al.], 801
- asepsis during neuraxial instrumentation (EV) [Hepner], 241
- compression of subarachnoid space by engorged epidural venous plexus in (CR) [Takiguchi et al.], 848
- CSF and spinal cord distribution of baclofen and bupivacaine during slow intrathecal infusion in pigs (PRA) [Bernards], 169
- hypotension, heart rate variability, and altered autonomic function (CO) [Latson], 1281
- is bilateral cerebral subdural hematoma more frequent after epidural anesthesia than spinal anesthesia? (CO) [Zeidan et al.], 1277
- long-term respiratory depression induced by intrathecal morphine (CO) [Scherens et al.], 431
- modifying baricity of local anesthetics by temperature adjustment (PRA) [Heller et al.], 346
- opiate pharmacology of intrathecal granulomas (PRA) [Allen et al.], 590
- supraspinal anesthesia (LI) [Jugovac et al.], 764
- time course and role of morphine dose and concentration in intrathecal granuloma formation in dogs (PRA) [Allen et al.], 581
- toxic damage to rabbit spinal cord after intrathecal administration of S(+)-ketamine (PRA) [Vranken et al.], 813
- what sunrise might reveal (CO) [Lacassie], 1282
- Spinal cord function and disease**
- CSF and spinal cord distribution of baclofen and bupivacaine during slow intrathecal infusion in pigs (PRA) [Bernards], 169
- effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 2. cytokines and p38 MAPKs in dorsal root ganglia and spinal cord (PRA) [Beloeil et al.], 139
- gray and white matter injury after spinal cord ischemia in rabbits (LI) [Kurita et al.], 305
- increased prostaglandin E<sub>2</sub> release and activated Akt/β-catenin signaling pathway occur after opioid withdrawal in rat spinal cord (PRA) [Dunbar et al.], 154
- interscalene brachial plexus block, reducing risk of entering spinal canal (CI) [Sardesai et al.], 9
- isoflurane produces delayed preconditioning against spinal cord ischemic injury in rabbits (LI) [Sang et al.], 953
- toxic damage to rabbit spinal cord after intrathecal administration of S(+)-ketamine (PRA) [Vranken et al.], 813
- Spine surgery**
- antifibrinolytic therapy use to mitigate blood loss during staged complex major spine surgery: postoperative visual color changes after tranexamic acid administration (CR) [Cravens et al.], 1274
- ASA postoperative visual loss registry (CI) [Lee et al.], 652
- postoperative visual loss (EV) [Warner], 641
- recurrent laryngeal nerve palsy after anterior cervical spine surgery (CI) [Audu et al.], 898
- Statins**
- improved postoperative outcomes associated with preoperative statin therapy (RA) [Hindler et al.], 1260
- the next advance in cardioprotection? (EV) [Kersten et al.], 1079
- Stellate ganglion**
- retropharyngeal hematoma after stellate ganglion block (PRA) [Higa et al.], 1238
- Sterile technique**
- asepsis during neuraxial instrumentation (EV) [Hepner], 241
- Sternotomy**
- pain after cardiac surgery (PRA) [Lahtinen et al.], 794
- Stomatatin**
- of mice and nematodes (EV) [Forman], 442
- tail clamp responses in stomatin knockout mice compared with mobility assays in *Caenorhabditis elegans* during exposure to diethyl ether, halothane, and isoflurane (LI) [Sedensky et al.], 498
- Stroke**
- inhaled nitric oxide for treatment of sickle cell stroke (CR) [Montero-Huerta et al.], 619
- Subclavian vein**
- Ambesh maneuver during subclavian vein catheterization (CO) [Singh et al.], 1062
- Succinylcholine**
- dose inflation when using precurarization (CO) [Donati], 222
- hyperkalemia induced by (CO) [Matthews], 430
- is the dose-related reduction in succinylcholine-induced myalgia due to cointervention? (CO) [Kettler], 222

## T

**Temperature and thermoregulation**

- a case of severe diffuse venous thromboembolism associated with aprotinin and hypothermic circulatory arrest in a cardiac surgical patient with factor V Leiden (CR) [Shore-Lesserson et al.], 219
- estimation of mean body temperature from mean skin and core temperature (CI) [Lenhardt et al.], 1117
- in hot pursuit (EV) [Hogan], 1077
- modifying baricity of local anesthetics for spinal anesthesia by temperature adjustment (PRA) [Heller et al.], 346
- pharmacologic and functional characterization of malignant hyperthermia in the R163C RyR1 knock-in mouse (LI) [Yang et al.], 1164

**Tetrodotoxin**

- effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 1. hyperalgesia, edema, and systemic cytokines (PRA) [Beloeil et al.], 128
- effects of bupivacaine and tetrodotoxin on carrageenan-induced hind paw inflammation in rats. 2. cytokines and p38 MAPKs in dorsal root ganglia and spinal cord (PRA) [Beloeil et al.], 139

**Thoracotomy**

- low-dose intravenous ketamine potentiates epidural analgesia after thoracotomy (PRA) [Suzuki et al.], 111

**Thromboembolic disorders**

- a case of severe diffuse venous thromboembolism associated with aprotinin and hypothermic circulatory arrest in a cardiac surgical patient with factor V Leiden (CR) [Shore-Lesserson et al.], 219
- pseudothrombus in aorta (CO) [Fukumoto et al.], 860
- regional anesthesia for parturient with venous sinus thrombosis and placental abruption undergoing fractional heparin therapy (CR) [Holzman et al.], 423
- systemic thromboses after cardiopulmonary bypass (CO) [Tanaka et al.], 428

**Tranexamic acid**

- antifibrinolytic therapy use to mitigate blood loss during staged complex major spine surgery: postoperative visual color changes after tranexamic acid administration (CR) [Cravens et al.], 1274

**Transcranial magnetic stimulation**

- postoperative left prefrontal repetitive transcranial magnetic stimulation reduces PCA use (PRA) [Borckardt et al.], 557

**Tumor lysis syndrome**

- tumor lysis syndrome induced by dexamethasone (CO) [Chanimov et al.], 633

**U****Ultrasonography**

- retrograde blood flow in the brachial and axillary arteries during routine radial arterial catheter flushing (CI) [Murphy et al.], 492
- third dimension to ultrasound-guided nerve blocks (CO) [Andreae], 856
- ultrasound is not the only technique to visualize third occipital nerve blockade (CO) [Galiano et al.], 858

**V****Vasculature**

- influence of endothelial glycocalyx degradation and surfactants on air embolism adhesion (LI) [Eckmann et al.], 1220
- a new method for detecting the proximal aortic arch and innominate artery by transesophageal echocardiography (CO) [Li et al.], 226
- pseudothrombus in aorta (CO) [Fukumoto et al.], 860
- retrograde blood flow in the brachial and axillary arteries during routine radial arterial catheter flushing (CI) [Murphy et al.], 492

**Visual loss**

- ASA postoperative visual loss registry (CI) [Lee et al.], 652
- postoperative visual loss (EV) [Warner], 641

**Vocal fold immobility**

- recurrent laryngeal nerve palsy after anterior cervical spine surgery (CI) [Audu et al.], 898

**Volatile anesthetics. See also Inhalation anesthesia and anesthetics**

- effects on M<sub>3</sub> muscarinic receptor-Gα<sub>q</sub> coupling (LI) [Nakayama et al.], 313
- interactions with cyclic nucleotides and Ca<sup>2+</sup> influx in airway smooth muscle (LI) [Prakash et al.], 976
- opioid-volatile anesthetic synergy (CI) [Manyam et al.], 267
- PET study of regional cerebral metabolism during general anesthesia with xenon (CI) [Rex et al.], 936

**Vulvar cancer**

- ganglion impar neurolysis under CT guidance for vulvar cancer (CO) [Ho et al.], 861

**W****Wernicke encephalopathy**

- complication of parenteral nutrition diagnosed by MRI (CR) [Attard et al.], 847

**X****Xenon**

- air bubble growth in water (CO) [Eckmann], 1059
- molecular mechanisms transducing the anesthetic, analgesic, and organ-protective actions of xenon (RA) [Preckel et al.], 187
- PET study of regional cerebral metabolism during general anesthesia with xenon (CI) [Rex et al.], 936