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Thomas Mütter, M.D., a pioneering surgeon in Philadelphia, Pennsylvania, championed anesthesia, asepsis, and education as essential pillars of clinical medicine. He remains a model clinician educator in his extraordinary advocacy for safe and compassionate patient care.

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◆◇◆ Risk Stratification Index 3.0, a Broad Set of Models for Predicting Adverse Events during and after Hospital Admission
S. Greenwald, G. F. Chamoun, N. G. Chamoun, D. Clain, Z. Hong, R. Jordan, P. J. Manberg, K. Maheshwari, D. I. Sessler.....673

From a dataset of more than 9 million patients, a risk score based on administrative claims history was developed to provide individualized risk profiles at hospital admission that may help guide patient management. SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT

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◆◇ Local Anesthetic Cardiac Toxicity Is Mediated by Cardiomyocyte Calcium Dynamics
J. Plakhotnik, L. Zhang, M. Estrada, J. G. Coles, P.-A. Lonnqvist, J. T. Maynes.....687

This study used human induced pluripotent stem cell–derived cardiomyocytes and found significantly altered cardiomyocyte calcium dynamics with bupivacaine but not ropivacaine. Calcium supplementation restored normal cardiomyocyte rhythm to bupivacaine-treated tissue. Calcium channel blockade selectively worsened bupivacaine cardiotoxicity. This study used a rat model (female) of cardiac toxicity and found that pretreatment with calcium improved survival of bupivacaine-treated rats and reduced survival of ropivacaine-treated rats. SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT

Critical Care Medicine

CLINICAL SCIENCE

◆◇◆ Validation of a Deep Learning–based Automatic Detection Algorithm for Measurement of Endotracheal Tube–to–Carina Distance on Chest Radiographs
M.-H. Huang, C.-Y. Chen, M.-H. Horng, C.-I. Li, I.-L. Hsu, C.-M. Su, Y.-N. Sun, C.-H. Lai704

A deep learning–based algorithm developed using portable chest radiographs from 1,842 adult intubated patients can identify the endotracheal tube tip, carina, and endotracheal tube tip–to–carina distance with a measurement error of 2.6 mm, 3.6 mm, and 4.0 mm, respectively. The algorithm performed as well as, if not better than, 11 critical care clinicians in identifying these portable chest radiograph landmarks. SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT

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ON THE COVER: Risk stratification helps guide appropriate clinical care. In this issue of ANESTHESIOLOGY, Greenwald *et al.* developed and validated a broad suite of predictive tools based on administrative claims history to provide individualized risk profiles at hospital admission. In an accompanying editorial, Glance *et al.* discuss the role of prediction models in healthcare and how journals can disseminate valid prediction models to clinicians. Cover illustration: A. Johnson, Vivo Visuals Studio.

- Greenwald *et al.*: Risk Stratification Index 3.0, a Broad Set of Models for Predicting Adverse Events during and after Hospital Admission, p. 673
- Glance *et al.*: Prediction Algorithms: Is Peer Review Enough?, p. 661

BASIC SCIENCE

   **Post-cardiac arrest Sedation Promotes Electroencephalographic Slow-wave Activity and Improves Survival in a Mouse Model of Cardiac Arrest**

T. Ikeda, E. Amorim, Y. Miyazaki, R. Kato, E. Marutani, M. G. Silverman, R. Malhotra, K. Solt, F. Ichinose716

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