

FEATURED ARTICLES

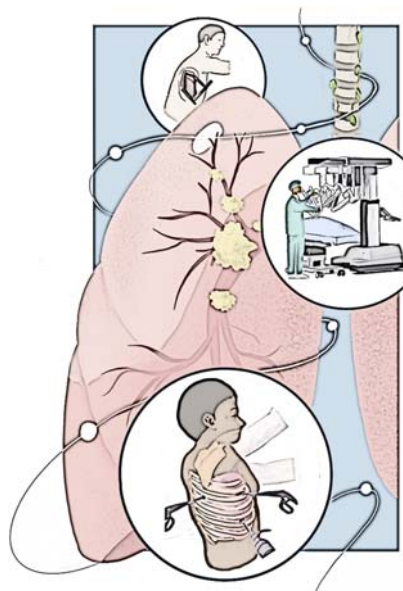


The Affordable Care Act at 10 Years: Evaluating the Evidence and Navigating an Uncertain Future

Neiman *et al.*

Following the recent 10th anniversary of the signing of the Affordable Care Act (ACA)—the largest comprehensive health care legislation in the United States since Medicare and Medicaid—the authors evaluated the impact of this statute on surgical practice. In their review, the authors describe reductions in the uninsured rates in surgical populations and improvements in surgical quality, including decreases in readmissions. Although access to timely surgical care has improved and related disparities in access have decreased, the improvements have not translated into reductions in inpatient mortality. From a financial standpoint, the ACA has been associated with improved hospital margins and a decreased risk of catastrophic financial consequences for patients undergoing emergency surgery. As we work toward the crucial goal of optimizing access to timely, equitable, high-quality, affordable surgical care for everyone in the United States, this timely update provides valuable insight about the areas where the ACA has worked well as well as the areas where there remains room for improvement.

(see page 102)

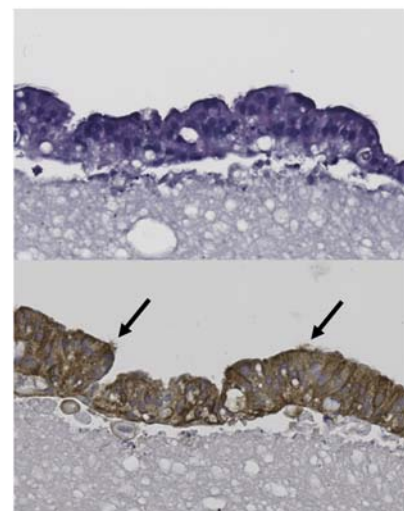


Comparative Effectiveness of Surgical Approaches for Lung Cancer

Manerikar *et al.*

It is unclear which of the various approaches for performing lung resection for cancer provides the best early and long-term outcomes. To address this gap in knowledge, the authors performed a systematic review and meta-analysis of published data comparing early, long-term, and disease-free survival after open surgery, video-assisted thoracoscopic surgery (VATS), and robot-assisted thoracoscopic surgery (RATS) for lung cancer. After identifying 19 studies that passed bias assessment and utilized propensity-score matching, they conducted an analysis using random-effects and fixed-effects models. The included studies described 47,054 patients: 22,958 (49%) had undergone open thoracotomy, 16,448 (35%) had VATS, and 7,646 (16%) had RATS. For early-stage cancer, RATS was associated with similar disease-free survival compared to thoracotomy and better disease-free survival compared to VATS. For advanced-stage cancer, disease-free survival was not significantly different between patients who underwent VATS compared to those who had open surgery, but the early mortality rate was lower in the VATS group. The authors concluded that VATS seems to offer an advantage over thoracotomy for patients with early-stage cancer. However, in patients with advanced lung cancer, high-risk patients, and elderly patients, the benefits of minimally invasive approaches over open surgery are less clear.

(see page 274)



Human Bronchial Epithelial Cell Growth on Homologous vs Heterologous Tissue Extracellular Matrix

Ravindra *et al.*

There remains an unmet need for an effective tracheal substitute for repairing tracheal defects in children and adults. To work toward addressing this need, the authors sought to advance the development of a solubilized extracellular matrix (ECM) hydrogel that would promote epithelialization, a key requirement for successful tracheal replacement. In this study, human bronchial epithelial cells (HBEC) were cultured under differentiation conditions on traditional decellularized ECM scaffolds and on ECM hydrogels derived from porcine tracheas (homologous tissue) and urinary bladders (heterologous tissue). They found that HBEC formed a confluent layer on all bioscaffolds and hydrogels; however, in contrast to cells grown on bioscaffolds, those grown on tracheal and bladder hydrogels showed evidence of ciliation (see arrows in above figure), goblet cell formation, and basement membrane deposition. This work demonstrates that ECM hydrogels are able to better support HBEC growth and differentiation compared to decellularized ECM bioscaffolds, suggesting that both homologous and heterologous ECM hydrogels may be useful in creating effective epithelialized tracheal grafts.

(see page 215)