age groups 60-79 (p<0.001) and ≥ 80 (p=0.0017). There was inadequate data for age group 40-59 for analysis.

CONCLUSIONS: The results of this review suggest that even in early stage disease, surgery provides a cancer-specific survival advantage for patients with BAC. Furthermore, the results of this study disprove our hypothesis, suggesting that elderly patients with BAC may benefit from surgery despite advanced age.

Predictors of prolonged length of stay after esophageal resection

Ko Un Park, MD, Zane Hammoud, MD, FACS, Ilan S Rubinfeld, MD, FACS
Henry Ford Hospital, Detroit, MI

INTRODUCTION: While the influence of anastomotic, pulmonary and cardiac complications in association to length of stay (LOS) have been studied extensively in esophageal resection, predicting the factors most responsible for prolonged LOS has not been reported. Utilizing the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) dataset we hypothesized that we would be able to predict those factors responsible for prolonged LOS.

METHODS: Under the Institutional Review Board approval ACS NSQIP data from 2005 to 2012 was reviewed focusing on current procedural terminology (CPT) codes for all esophageal resections for any pathology. Resections with non-gastric conduits were excluded. Outlier status for length of stay (LOS) was defined as >75th percentile. Logistic regression analysis and linear regression to predict LOS.

RESULTS: A total of 3538 cases were reviewed. The 75th percentile for LOS was 17 days. Preoperative predictors of LOS outliers include emergency surgery and frailty index (odds ratio [OR] 3.7 and OR 3.6, all p<0.001). Patients with deep surgical site infection (SSI) and progressive renal insufficiency had the highest likelihood of prolonged LOS (OR 5.2 and OR 5.1, all p<0.001). Other postoperative complications including failure to wean off ventilator in 48 hours, urinary tract infection (UTI), and pneumonia were associated with LOS outlier (OR 3.7, OR 2.7, and OR 2.7, all p<0.001).

CONCLUSIONS: Non-technical complications such as UTI and pneumonia after esophageal resection are associated with longer LOS. Although meticulous surgical technique remains paramount, our study demonstrates that postoperative non-technical complications factor into prolonged LOS. A focus on such factors may lead to reductions in prolonged LOS.

Driver mutation status in resected stage I lung adenocarcinoma: correlation with chest computed tomography findings

Michael Lamut, MD, FACS, Haiyu Zhou, MD, Carol C Wu, MD, Mari Mino-Kenudson, MD, Wen Chen, MD, Douglas J Mathisen, MD
Massachusetts General Hospital, Boston, MA

INTRODUCTION: Indentify the correlation of chest computed tomography (CT) appearance and the presence of oncogenic driver mutations in resected stage I lung adenocarcinoma.

METHODS: Patients with resected stage I lung adenocarcinoma were analyzed from 2008-2012 and categorized into 3 groups: pure ground glass (GGO), mix-solid GGO, and solid. All patients underwent lobectomy or segmentectomy and driver mutation analysis using a multiplex PCR-based assay from frozen tumors. Disease free survival (DFS) and overall survival (OS) were compared between patients with EGFR, KRAS and wild-type tumors using Kaplan-Meier methods and Cox regression models.

RESULTS: 237 patients with stage I lung adenocarcinoma were analyzed with a median follow-up=34 months. Female gender was observed in 68% (160/237) and 21% (50/237) were non-smokers. Pure GGO was identified in 9% (n=21), mixed solid in 69% (n=164), and solid in 22% (n=52) of cases. EGFR and KRAS mutation rates were 18.6% (n= 44) and 34.6% (n= 82), respectively. Univariate analysis showed that KRAS-mutated tumors (HR 1.91; p<0.01), solid component > 50%, (HR 2.65; p=0.04), and smoking status (HR 3.59; p=0.03) were associated with worse DFS, KRAS-mutated tumor showed worse OS (HR 1.65, 95% CI 1.09-2.49;p=0.018) and DFS (HR 1.84, 95% CI 1.31-2.59;p<0.01) on multivariate analysis. Tumors that harbored >50% solid component on CT chest with a KRAS mutation were associated with worse DFS (HR 2.87, 95% CI 1.4-5.92; p=0.004) and OS (HR 2.51, 95% CI 1.03-6.1; p=0.04) in multivariate analysis compared to wild type tumors that were <50% solid.

CONCLUSIONS: KRAS mutation and percent solid component on chest CT were predictive of worse outcome in surgically resected stage I lung adenocarcinoma.

Outcomes for locally advanced T1-T3N1M0 esophageal cancer: the impact of traveling to a high volume center for treatment

Paul J Speicher, MD, Brian R Englund, MD, Asvin Ganapathi, MD, Thomas A D’Amico, MD, Mark F Berry, MD
Duke University Medical Center, Durham, NC

INTRODUCTION: An association between volume and outcomes has been observed for esophagectomy, though little is known about why or how patients choose low or high volume centers. We hypothesize that travel distance influences a patient’s choice of facility. The purpose of this study was to evaluate how distance and volume influence treatment and outcomes of patients with locally advanced esophageal cancer.

METHODS: Predictors of receiving esophagectomy for patients with T1-3N1M0 mid or distal esophageal cancer in the National Cancer Data Base were identified using multivariable logistic regression. Survival was compared using propensity-adjusted Cox proportional hazards modeling with inverse-probability-weighting between two groups: patients in the bottom quartile (Local) and