gery at age two or older with the ICD-9 procedural code for cleft lip repair. Additional characteristics examined across cohorts include length of stay and Consumer Price Index (CPI) adjusted charges. RESULTS: A total of 8,385 discharges for cleft lip repair were reported. In CL patients secondary surgery represented 16.3% (N=134), 14.2% (N=105), and 15.1% (N=129) of surgeries for 2003, 2006, and 2009, respectively. In CP patients secondary surgery represented 25.7% (N=500), 23.3% (N=550), and 22.2% (N=555) for 2003, 2006, and 2009, respectively. From 2003-2009, mean length of stay and CPI-adjusted costs decreased in all cohorts except secondary surgery in CP patients. CONCLUSIONS: One fourth of all children required secondary surgery. The proportion of secondary cleft lip surgery did not differ significantly across years. Once adjusted, costs have decreased for the majority of patients, a finding in contrast to previously published studies.

**PDN60**

THE EFFECT OF MEDICARE PART D ON MEDICATION PRESCRIBING PATTERNS AND DRUG UTILIZATION: THE CASE OF NON-BENZODIAZEPINE SEDATIVE HYPNOTICS

**TeLL** Ting A

**New Southeastern University, Ft. Lauderdale, FL, USA**

**OBJECTIVES:** This study investigated the effect of Medicare Part D on prescribing patterns and drug utilization of non-benzodiazepine sedative hypnotics. METHODS: Time-series analyses were conducted using data from National Ambulatory Medical Care Survey (NAMCS). Subjects were derived from US outpatient visits between 2002 and 2009 where the primary payment source was Medicare and at least one non-benzodiazepine sedative hypnotic drug was prescribed. Data trends were graphically plotted and further analyzed using segmented regression to estimate the effects of the Medicare Part D on drug utilization. A weighted multivariate logistic regression was conducted to predict the maximum likelihood of prescribing pattern associated with patient and physician socioeconomic characteristics. All analyses utilized SAS PROC LOGISTIC and used the general linear model when adjusting for the complex sampling design employed by NAMCS database. RESULTS: An estimated 31.52 million of Medicare beneficiaries received at least one non-benzodiazepine sedative hypnotic between 2002 and 2009 during outpatient visits. After Medicare Part D implementation, in 2006, there was a 24% increase in Medicare outpatient visits between 2006 and 2009. In the same time period, prescribing of non-benzodiazepine sedatives increased significantly by 46.3%. The results from segmented regression indicate that the implementation of Medicare Part D drug benefits has significantly increased the sedative utilization in Medicare population (p<0.0001). Multivariate logistic regression revealed that patient gender, geography, chronic condition, and physician specialty all play an important role in determining the utilization pattern of non-benzodiazepine sedatives. CONCLUSIONS: Our study indicated that the use of non-benzodiazepine hypnotics increased dramatically after Medicare Part D. Increased utilization may also be related to the switching effect from benzodiazepine formulary exclusion and/or off-label use for insomnia pharmacotherapy. These findings show the importance of using data analysis to identify substantial consequences from policy implementation and the need to provide additional guidance to insurers on how to effectively monitor prescribing patterns.

**PDN61**

ANALYSIS OF THE BURDEN OF 30-DAY READMISSIONS AMONG PATIENTS WITH EPILEPSY: A RETROSPECTIVE STUDY IN A COMMERCIALLY-INSURED UNITED STATES POPULATION

Wale F1, Pappatessa F1, Malesmen M2

1Sunovion Pharmaceuticals Inc, Marlborough, MA, USA; 2THORON EVD, Stockholm, Sweden

**OBJECTIVES:** To evaluate the burden of 30-day readmissions in antidepressively-treated patients with epilepsy. METHODS: The MarketScan® retrospective database (Jan-2006 to Dec-2011) was used. Selected patients had: age ≥ 18, a diagnosis of epilepsy (ICD-9 345.xx), age 2, Aggarwal S1, Yoo A.C.2

**CONCLUSIONS:** Secondary surgeries represent a significant portion of cleft palate repairs performed in the United States. Children with cleft palate often have fewer secondary surgeries compared to those with cleft lip and palate.

**PDN62**

NATIONAL ESTIMATES OF PRIMARY AND SECONDARY CLEFT PALATE SURGERY: RESULTS FROM THE KIDS’ INPATIENT DATABASE

Trumpf K1, Heaton P.C.2

1University of Cincinnati, Cincinnati, OH, USA; 2University of Cincinnati College of Business, Cincinnati, OH, USA

**OBJECTIVES:** Children with cleft palate (CP) or cleft lip and palate (CLP) may require multiple surgeries to improve their appearance and function. The objective of this study was to estimate the proportion of cleft palate surgeries identified as secondary (or revision) in patients with a diagnosis of cleft palate only or cleft lip and palate. Additional objectives included identification and analysis of patient and hospital level characteristics. METHODS: The Kids’ Inpatient Database (KID), a nationally representative sample of pediatric inpatient visits, was used for this study. Years analyzed included 2003, 2006, and 2009. Subjects were identified by International Classification of Diseases Ninth Revision (ICD-9) diagnosis of cleft palate only or cleft lip and palate. Primary surgery was defined as a surgery before three years of age with the ICD-9 procedural code ‘Correction Cleft Palate.’ Secondary surgery was defined as a surgery at age three or older with any of the following ICD-9 procedural codes: ‘Correction Cleft Palate,’ ‘Revision Cleft Palate Repair,’ ‘Closure Fistula Mouth,’ or ‘Plastic Repair Palate’ Hospital, patient, and clinical characteristics were also examined across cohorts. All costs were adjusted to 2009 dollars using the Consumer Price Index (CPI). RESULTS: For the three years combined, 15,861 discharges for cleft palate repair were reported. 7,856 for CP only patients and 8,055 for CLP patients. Secondary surgery accounted for 28.1% (N=2,193) of palate repairs performed in children with CP only, compared to 43.5% (N=3,505) of palate repairs in children with CLP. Secondary surgery rates did not differ significantly across years. From 2003-2009, CPI-adjusted costs decreased in all cohorts except secondary surgery in CP patients.

**R E S E A R C H P O S T E R A S S E M B L Y • S E S S I O N I I**

**DISEASE-SPECIFIC STUDIES**

**CANCER – Clinical Outcomes Studies**

**PCN1**

META-ANALYSIS OF ANASTOMOTIC LEAK RATES FOLLOWING HAND-SEWN SUTURE VERSUS STAPLED ANASTOMOSES DURING RIGHT COLON SURGERY

Kay G1, Choo P.P2, Aggarwal S1, You A.C.2

1Ethnic Surgical Care, Johnson & Johnson, Somerville, NJ, USA; 2Ethnic Surgical Care, Johnson & Johnson, Cincinnati, OH, USA; 3Novel Health Strategies, Bethesda, MD

**OBJECTIVES:** Ileocolic anastomoses are commonly performed for right-sided colon cancer and Crohn’s disease. Anastomotic leak complications are a significant source of patient morbidity and mortality and have a major impact on health care costs. The objective of this analysis was to compare anastomotic leak rates following ileocolic anastomoses performed using mechanical stapling and hand-sewn suture techniques. METHODS: Pubmed, Embase, Cochrane Library and trial registries were searched for randomized controlled trials comparing hand-sewn and stapled ileocolic anastomoses published between 1990 and December 2013. The odds ratio (OR) for overall anastomotic leak rate was calculated and then weighted and pooled in a meta-analysis with Mantel-Haenszel fixed-effect modeling with Chi square test for heterogeneity. RESULTS: Eight studies with a total of 1,172 patients were included. Two studies included low rectal cancer. One fourth of all patients had colorectal cancer and 2 were for other diagnoses. There were 11 (2.31%) anastomotic leaks reported in 457 patients in the mechanically stapled group, and 44 (6.15%) leaks in 715 patients in the hand-sewn (suture) group. At study level, the median leak rates in stapled and hand-sewn groups were 14% and 17.9%, respectively. Overall, the odds of anastomotic leaks were reduced to less than half with mechanical stapling compared to hand-suture techniques (pooled OR = 0.46; 95% CI = 0.24 to 0.89; p < 0.02). CONCLUSIONS: This meta-analysis of randomized controlled trials comparing hand-sewn with stapled ileocolic anastomoses demonstrates a significantly lower rate of anastomotic leak-
age with mechanical stapling - which has potential to improve patient outcomes, lower re-operation rates and lower costs.

PCN2

A META-ANALYSIS OF RANDOMIZED CLINICAL TRIALS (RCTS) ON EPIDERMAL GROWTH FACTOR RECEPTOR (EGFR) INHIBITORS (EGF-TKIs) FOR ADVANCED NON-SMALL-CELL LUNG CANCER (NSCLC)

Zhang T1, Xu M1, Pan P1, Cai S2, Wu C1, Liu Y1

1SUNY at University of Buffalo, New York, NY, USA, 2Harvard Medical School, Boston, MA, USA

OBJECTIVES: Lung cancer is the first cause of cancer death in both men and women worldwide and 85% are NSCLC. As a targeted therapy for NSCLC, EGF-TKIs has been compared with traditional chemotherapy in various trials in different countries but there is a lack of comprehensive literature review of these RCTs especially from Health-Related Quality of Life (HRQoL) perspective. We compared the efficacy, distress symptoms, response rate, relapse, quality of life, and survival of patients with NSCLC treated with EGF-TKIs (studied in) and chemotherapy for advanced NSCLC patients with largest magnitude. METHODS: Two authors independently searched published RCTs comparing EGF-TKIs vs chemotherapy for advanced NSCLC between Jan 1, 1966 and July 31, 2013 in PubMed, Cochrane Library, Web of Sciences, proceedings of ASCO and ESMO. We conducted a meta-analysis by Revman 5.0 using either random or fixed effects inverse variance weighted method, determined by heterogeneity levels. RESULTS: Twenty-two eligible studies and 6728 patients were included. Comparing to chemotherapy, EGF-TKIs were superior in objective response rate (OR=1.90, 95% CI=1.32-2.57, P<0.0001) and progression free survival (HR=0.78, 95%CI=0.66-0.91, P=0.00001). However, no significant differences were observed on disease control rate (OR=1.24, 95% CI=0.96-1.60), overall survival (HR=1.19, 95% CI=0.96-1.50), OS survival rate (OR=0.96, 95% CI = 0.82-1.13). EGF-TKIs demonstrated less adverse events in neutropenia (OR=0.01, 95% CI=0.00-0.20), anemia (OR=0.2, 95% CI=0.14-0.31), fatigue (OR=0.18, 95% CI=0.12-2.09) and nausea (OR=0.35, 95% CI=21.06-0.30). However, chemotherapy had less rash (OR=7.18, 95% CI=4.67-11.05) and diarrhea (OR=2.10, 95% CI=1.98-2.21). The evaluation of patients reaching the last cancer center outcomes than chemotherapy according to the three HRQol instruments: Functional Assessment of Cancer Therapy-Lung (OR=1.62, 95% CI=1.38-1.91), Trial Outcome Index (OR=1.19, 95% CI=1.61-2.33), and Lung Cancer Subscale (OR=1.19, 95% CI=1.01-1.39). CONCLUSIONS: Though no obvious survival benefit was observed, EGF-TKIs demonstrated significantly better safety and HRQoL outcomes than chemotherapy.

PCN3

THE IMPACT OF PRE-EXISTING CHRONIC CONDITIONS ON CANCER DIAGNOSIS, RECEIPT OF TREATMENT AND SURVIVAL AMONG MEDICARE BENEFICIARIES WITH COLORECTAL CANCER IN A RURAL POPULATION

Ranganathan R1, Goren A1, Sambamoorthi U2, Pan X1

1West Virginia University School of Pharmacy, Morgantown, WV, USA, 2West Virginia University School of Medicine, Morgantown, WV, USA

OBJECTIVES: To determine the comorbidity burden and the association of specific pre-existing chronic conditions with colorectal cancer (CRC) stage-at-diagnosis, treatment, and survival among elderly Medicare beneficiaries from a rural population. METHODS: This population-based retrospective cohort study used data on fee-for-service Medicare beneficiaries diagnosed with CRC under Medicare claims by following them for 12-months from their CRC-diagnosis date or until death. Receipt of minimally-appropriate CRC treatment (MARCH) as defined by National Comprehensive Cancer Network (NCCN) guidelines was selected. Treatment was defined as surgery, chemotherapy, and radiation. All-cause and CRC-specific mortality in the 36-month period following the CRC-diagnosis were examined, after accounting for selection bias using inverse probability treatment weights and adjusting for socioeconomic, cancer site and stage-at-diagnosis, receipt of MARCH, and pre-existing conditions. RESULTS: The WVVR-CareMedicare linked database had a higher proportion of beneficiaries as compared to those from national data across almost all the condition clusters including previous-malignancy, COPD, depression, gastrointestinal conditions, heart-conditions, hypertension, liver-conditions, and renal-conditions. Beneficiaries from the WVVR-CareMedicare linked database with most chronic-conditions were generally not likely to be diagnosed at distant-stage CRC, and possibly not as less aggressively treated for CRC as reported by some other studies. Only a few conditions were negatively associated with CRC-specific mortality including depression (adjusted hazards ratio (AHR)=1.25, 95%CI=1.01-1.56) and liver-conditions (AHR=1.38, 95%CI=1.19, 1.60). However, almost all chronic-conditions were negatively associated with all-cause mortality in this study. CONCLUSIONS: This study highlights the need to focus on cancer-care that is better integrated with co-management of chronic-conditions, especially among those from rural-areas who are likely to have a high comorbidity burden.

PCN4

GEOGRAPHICALLY-WEIGHTED REGRESSION ANALYSIS OF LATE-STAGE PROSTATE CANCER INCIDENCE IN FLORIDA

Xiao H1, Gooverts P2, Ali AA1, Adunlin G1, Tan F3, Gwede C4, Huang Y1

1Florida A&M University, Tallahassee, FL, USA, 2Virginia Commonwealth University, Richmond, VA, USA, 3Florida Health, Tallahassee, FL, USA, 4Florida Department of Health, Tallahassee, FL, USA

OBJECTIVES: To account for the non-stationarity of relationships in space, aspatial regression was used to investigate the "spatial effects" or the "spatial dependence" of geographical variations, whereby the regression model is fitted within local windows and each observation is weighted according to its proximity to the center of the window. This study aims to conduct regression analysis in a spatial context to test the local impacts of putative factors on late-stage diagnosis of prostate cancer in Florida during the period 2001-2007. METHODS: A logistic regression was performed spatially at and for the 5 km spacing grid overlaid over Florida and using the grid cases within a radius of 125 km of each node. Each observation was weighed as a function of its proximity to the center of the window (bisquare adaptive weight function). Covariates included age, race, marital status, smoking, type of health insurance and socio-economic status, facilities, prior prostate cancer treatment, and socio-economic differences. Results: Analysis of the logistic regression model revealed that Hispanic ethnicity (odds=1.697) and more than 2 comorbidities (odds=3.936), smoking (odds=1.283), being African American (odds=1.199) and living in census tracts with farmhouses (odds=1.124) having a positive impact on the likelihood of late-stage diagnosis. However, almost no obvious survival benefit was observed, EGFR-TKIs demonstrated less adverse events in neutropenia and diarrhea (though no significant differences were observed on disease control rate, overall survival, OS survival rate, and diarrhea). The evaluation of patients reaching the last cancer center outcomes than chemotherapy according to the three HRQol instruments: Functional Assessment of Cancer Therapy-Lung (OR=1.62, 95% CI=1.38-1.91), Trial Outcome Index (OR=1.19, 95% CI=1.61-2.33), and Lung Cancer Subscale (OR=1.19, 95% CI=1.01-1.39). CONCLUSIONS: Though no obvious survival benefit was observed, EGF-TKIs demonstrated significantly better safety and HRQoL outcomes than chemotherapy.