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 EPIDEMIOLOGICAL GROUPS FOR ONCOLOGY PATIENTS: INTERVENTIONS (EGFR-TKIs) FOR ADVANCED NON-SMALL CELL LUNG CANCER (NSCLC)
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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, EGFR-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, outcomes and patterns in oncological and HRQoL between EGFR-TKIs (gefitinib) and chemotherapy for advanced NSCLC patients with largest magnitude. METHODS: Two authors independently searched published RCTs comparing EGFR-TKIs vs chemotherapy for advanced NSCLC between Jan 1, 1966 and July 31, 2013 in PubMed. Cochrane library, and clinical trials database and by reviewing the 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 chemotherapy, EGFR-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=0.96-1.61) and overall survival (OS) (HR=0.95, 95%CI= 0.82-1.13). EGFR-TKIs demonstrated less adverse events in neutropenia (OR=0.01, 95%CI=0.01-0.02), anemia (OR=0.2, 95%CI=0.14- 0.31), fatigue (OR=0.18, 95%CI=0.12-0.29) and nausea (OR=0.35, 95%CI=2.01-0.60) and less grade 3 or 4 adverse events (OR=0.29, 95%CI=0.26-0.33). However, chemotherapy had less rash (OR=7.18, 95%CI=4.67-11.05) and diarrhea (OR=2.10, 95% CI=0.51-1.19). A meta-analysis evaluating to use as lung cancer first line treatment outcomes and the quality of life outcomes derived from the HRQL questionnaires are shown. CONCLUSIONS: Though no obvious survival benefit was observed, EGFR-TKIs demonstrated significantly better safety and HRQoL outcomes than chemotherapy.

PCN3
THE IMPACT OF PRE-EXISTING CHRONIC CONDITIONS ON CANCER DIAGNOSIS, TREATMENT AND SURVIVAL AMONG MEDIATE CARE BENEFICIARIES WITH COLORECTAL CANCER IN A RURAL POPULATION
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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 from on 1,163 beneficiaries diagnosed with CRC and matched controls, between 2003-2006, identified from the West Virginia Cancer Registry (VWCRC). Medicare linked database (n=2,119). Beneficiaries were classified in specific chronic-conditions clusters. Medical treatment received was ascertained from beneficiary claims by following them for 12-months from their CRC-diagnosis data or until death. Receipt of minimally-appropriate CRC treatment (MAC) as defined by National Comprehensive Cancer Network (NCCN) guidelines and receipt of surgery, chemotherapy, and radiation were examined. 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 adjusting for its effect and trends of cancers, cancer site and stage-at-diagnosis, receipt of MAC, and pre-existing conditions. RESULTS: The VWCRC-Medicare 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 VWCRC-Medicare 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 hazard ratio (AHR)=1.25, 95%CI= 1.01-1.46), 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
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OBJECTIVES: To account for the non-stationariness of relationships in space, spatio-temporal regression is an alternative model with geographical weighting (GWR), 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 astaphially at the 4 km2 grid spacing grid overlaid over Florida and using a moving window of 125 km2 with cases within a radius of 125 km2 of each node. Each observation was weighted 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 geographic facitlities, primary-care offices, population density, cancer facilities, poverty, median income, the share of non-Hispanic white population, insured, non-Hispanic black population, and health care expenditures. RESULTS: The observed impact of socioeconomic and demographic factors on temporal trends in health cancer incidence and mortality and their geographical variations would have important implications for resource allocation.

PCN5
TEMPORAL AND GEOGRAPHIC VARIATIONS OF PROSTATE CANCER INCIDENCE AND MORTALITY IN FLORIDA
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OBJECTIVES: Differences in cancer incidence and mortality are apparent among various demographic groups. Understanding the underlying determinants that place certain groups at higher risk is imperative. Analyzing temporal trends can provide a comprehensive picture of the burden of the disease and generate new insights about the impact of various interventions. This study aims to use advanced geospatial and temporal statistical techniques to model temporal trends in prostate cancer incidence and mortality and their geographical variations across Florida. METHODS: Annual census-tract level rates were computed over the period 1981-2007 for two races (white and black), two categories of age (<60 and ≥60), and five calendar periods. We then smoothed using binomial smoothing to filter the noise caused by small population sizes. Joinpoint regression and new disparity statistics were applied to analyze temporal trends and detect potential racial and socio-economic differences. RESULTS: With time trends of the different factors were examined across two distinct populations and study designs. CONCLUSIONS: The observed impact of socioeconomic and demographic factors on temporal trends in health cancer incidence and mortality and their geographical variations would have important implications for resource allocation.

PCN6
OBESITY AND CANCER ARE INDEPENDENTLY ASSOCIATED WITH INCREASED COMORBID RISK IN DISTINCT 2013 DATA SOURCES: CLAIIL ISRAEL EMR AND UNITED STATES NATIONAL HEALTH INTERVENTION SURVEY (NHIS)
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OBJECTIVES: Increased comorbid/mortality risk accompanies both excess weight and cancer. Charlson comorbidity index (CCI) scores in obesity and cancer were examined across two distinct populations and study designs. METHODS: Comprehensive, electronic medical record (EMR) 2013 data from Clalit, a payer-provider, closed-system health fund covering 55% of the Israeli population, were used to assess cancer diagnosis (vs. no cancer) and obesity (BMI>30 vs. ≤30) among individuals aged ≥1 in Israel (n=2,552,720). Similarly examined were 2013 adult (21+) respondents in the U.S. NHIS (n=71,118), a cross-sectional, self-reported online survey. CCI, a weighted sum of comorbidities predicting mortality risk, was calculated based on registry diagnostic codes (Clalit) or self-reported diagnosis data (NHIS). CCI categories and mean scores were compared across obesity/cancer groups and within age strata. RESULTS: Proportions or patterns of individuals with CCI≥1 were comparable across age brackets (21-49, 50-64, ≥65) in Clalit (10.5%, 13.3%, 6.6%, 7.7%, respectively) and NHIS (14.1%, 31.1%, 44.3%). CCI was higher among those with vs. without cancer (or obese vs. non-obese), all p<0.05, among both Israeli (Clalit) and U.S. (NHIS) individuals. Across non-obesity/non-cancer, obesity/ non-cancer, obesity/cancer, and non-obesity/cancer significant positive proportional proportions of individuals had CCI≥1 in both Clalit (23.4%, 41.9%, 68.9%, 77.7%, respectively) and NHIS (16.7%, 31.5%, 56.0%, 70.0%), plus increasing CCI means in all groups. CONCLUSIONS: Across distinct data sources (Israeli insurance-clinical EMR and U.S. online survey), comparable comorbidity rates emerged within corresponding age brackets (notwithstanding these emerging differences) and for both populations. Patterns of similar risk emerged with both cancer and obesity. This underscores the global challenge posed by the “dual-risk” profile of obesity with cancer history. Moreover, comprehensive and integrated EMR data can produce convergent results with validated, self-reported data, across diverse geographies.