sis. Late-stage diagnosis was associated with lower median income and lower provider-to-case ratio. Among all comorbidity conditions, presence of congestive heart failure, paralytic ileus, metastatic cancer, cancer, coagulation deficiency, weight loss, fluid and electrolyte disorders, blood loss anemia, deficiency anemias, alcohol abuse, pneumococcal pneumonia, protein calorie malnutrition, disturbances of amino acid metabolism, brain and other neurological disorders were risk factors of late-stage diagnosis. CONCLUSIONS: Overall, late-stage diagnosis was associated with factors that suggest lack of access to care. Although comorbidity is often associated with increased health care utilization, the association of comorbidity with late-stage prostate cancer diagnosis suggests that individuals with significant comorbidity may not be offered routine prostate cancer screening, and that focus is directed toward management of presenting health problems rather than routine cancer screening.

PCN4

EFFECT OF TREATMENT DELAYS ON LATE-STAGE PROSTATE CANCER SURVIVAL

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OBJECTIVES: To examine whether delay in receiving treatment for late-stage prostate cancer was related to adverse survival outcomes. METHODS: The Florida Cancer Data System was used to extract information on men diagnosed with prostate cancer with their demographics, primary health insurance payer at diagnosis, treatment and all-cause death. Census-tract level socioeconomic status was extracted from Census 2000 and linked to cancer data. Comorbidity following Elixhauser Index and County-level provider-to-case ratio were computed. Overall survival was measured as the number of days between initiation of first treatment and death? Descriptive statistics were performed. Log-rank test was conducted to evaluate the relationship between predictor variables and survival. Kaplan-Meier estimation was used to generate survival curves. Cox proportional hazards regression model was determined to reduce hazard ratios (HRs) and 95% confidence intervals after controlling for covariates. RESULTS: Between October 1, 2001 and December 31, 2007, 10,330 men, average age of 69 had complete vital status, date of treatment and survival time greater than zero were diagnosed with late-stage prostate cancer in Florida. Of these, 3,331 (32%) died. The medians were 286 days for survival and 39 days between the date of diagnosis and initiation of first treatment. Treatment delay was more likely to increase survival. Compare to patients in active surveillance, those receiving other treatment options had an increased overall survival. Patients with comorbidities, diagnosed at older age, or uninsured were more likely to have worse survival. Living in a census tract with higher educational attainment was associated with better overall survival. CONCLUSIONS: Further investigation is needed to understand the reasons for disparity in prostate cancer survival so that interventions can be implemented to increase prostate cancer screening. The association between changes in patterns of care, and treatment delay need to be elucidated.

PCN5

CANCER DURING PREGNANCY: CLINICAL AND ECONOMIC CHARACTERISTICS ASSOCIATED WITH INPATIENT CASES IN THE UNITED STATES

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OBJECTIVES: To assess clinical characteristics and national charges for maternal hospitalizations and complications associated with cancers during pregnancy in the United States. METHODS: This population-based retrospective study of inpatient preterm complications or delivery and economic burden associated with cancer diagnosed during pregnancy utilized Agency for Healthcare Research and Quality (AHRQ) Healthcare Cost and Utilization Project (HCUP) Nationwide Inpatient Sample (NIS) data from 2005-2009. Inclusion criteria included >18 years, any maternal diagnosis or procedures on record, and any diagnosis of cancer. Descriptive analyses were conducted to report the most common forms of cancer, complications of pregnancy, and comorbidities. Generalized linear models including multivariate logistic and gamma regressions were employed to assess outcomes of preterm births and charges, respectively, based upon patient demographics, primary payer, hospital characteristics, length of stay, Elixhauser comorbidities, preterm labor, abnormalities in fetal heart rate/rhythm, and pre-eclampsia/eclampsia. RESULTS: Overall, 14,190 inpatient cancer discharges in pregnant adults from 2005-2009 were observed. The mean maternal age was 30.3 ± 6.5 years, with an average length of stay being 5.0 ± 2.8 days. The national bill summed to $434 million, during which $31,366 (~1.76%) per case. The most common cancers were Hodgkin’s disease and other lymphomas (27%), breast cancer (15%), leukemias (14%), genitourinary cancers (14%), and thyroid/endocrine cancers (7%). Some 2,846 full-term births and 2,140 premature births occurred; 521 inpatient deaths/mis-carriages were reported. In cases involving births, regression analyses found that metastatic cancer, solid tumors, and pre-eclampsia/eclampsia were significantly associated with preterm delivery. Increases in total charges were significantly associated with metastatic cancer, chronic blood loss anemia, hypertension, and fluid/electrolyte disorders. CONCLUSIONS: Some 4,986 births were observed among pregnant adults with cancer during 2005-2009, with a large proportion involving premature delivery. Continued research is warranted concerning the management and long-term implications of cancer and its treatment upon both mothers and their surviving children.

PCN6

ARE QALY GAINS FOR NEW PHARMACEUTICALS INCREASING IN CANCER BUT NOT OTHER DISEASES?

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OBJECTIVES: Spending on pharmaceuticals as a proportion of total health care spending is increasing. It is unclear, however, if this increase is translating into increases in QALYs relative to standard care over time. Our objectives were to evaluate incremental QALY gains reported in cost-effectiveness studies published from 1998 to 2007, and to compare findings for cancer and non-cancer related pharmaceuticals. METHODS: We used the Tufts Medical Center Cost-Effectiveness Analysis Registry (www.cearegistry.org) to identify cost-utility ratios for pharmaceuticals published from 2000-2010. We considered incremental QALY gains, publication year, and source of study funding (drug manufacturer or other), for three sets of analyses: all pharmaceuticals; anti-cancer (n = 2727); and, non-cancer related pharmaceuticals (n = 235). We used multivariate linear regression to evaluate the relationship between incremental QALY gains (dependent variable) with study publication year (independent variable). We re- gressed p values below the 0.05 level. Of a sample population ped values between 0.05-0.1 as weakly significant. RESULTS: Adjusting for source of study funding, in terms of the relationship between incremental QALY gains and study publication year: for all pharmaceuticals, the estimated coefficient for publication year was negative (<0.015, p<0.001); for non-cancer related pharmaceuticals the estimated coefficient for publication year was negative, (-0.022, p=0.017); and, for cancer related pharmaceuticals, the estimated coefficient for publication year was positive (0.069, p=0.001). CONCLUSIONS: The results suggest that, in contrast to non-cancer related pharmaceuticals, the effectiveness of cancer-related pharmaceuticals show increasing gains over time. That is, incremental QALY gains for cancer-related drugs are increasing.

PCN7

LIFE EXPECTANCIES AND PROGNOSTIC FACTORS OF SURVIVAL IN PATIENTS WITH DIFFERENT TYPES OF CANCER UNDERPROLONGED MECHANICAL VENTILATION: A NATION-WIDE ANALYSIS OF 5,138 CASES DURING 1998-2007

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OBJECTIVES: The aim of this study was to determine survival rate, life expectancy, quality-adjusted life expectancy (QALE), and prognostic factors of cancer patients of different organ-systems undergoing prolonged mechanical ventilation (PMV). METHODS: We used data from the National Health Insurance Research Database (NHIRD) of Taiwan, year of 1998 to 2007, and linked with the National Mortality Registry to ascertain the mortality. A random sample of this population was performed, and subjects who had continuously undergone mechanical ventilation for longer than 21 days were enrolled in this study. We linked our dataset with the registry of cancer under catastrophic illnesses of NHIRD. The life expectancies of different organ-systems were estimated using a semi-parametric method with assuming constant excess hazard and barrowing survival function of general population from the vital statistics of Taiwan. Multivariate proportional hazard model was constructed to assess the effect of different prognostic factors, including age, sex, disease, organ systems, comorbidity levels, and PMV periods, of life. Data were taken from a sample of 142 patients under PMV and measured with EQ-5D, which were classified into partial and poor cognitions. RESULTS: The analysis of 5138 cancer patients undergoing PMV revealed the median survival was 1.37 months with a one-year survival rate of 14.3%. Head and neck cancer patients seemed to survive the longest. The overall life expectancy was 1.21 years with estimated QALE ranged from 0.16 to 0.36 quality-adjusted life years for patients with poor and partial cognitions, respectively. Metastatic cancer status, cancerc brother and liver significantly predict a shorter survival independently. CONCLUSIONS: Cancer patients with PMV had a poor long term outcome. Palliative care should be considered early in these patients with such a condition, especially when metastasis occurred.

PCN8

PRIMARY ANDROGEN DEPRIVATION THERAPY VERSUS RADICAL PROSTATECTOMY IN SEER-Medicare DATABASE: A COHORT EFFECTIVENESS ANALYSIS OF RETROSPECTIVE COHORTS

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OBJECTIVES: To examine the comparative effectiveness of primary androgen deprivation therapy (PADT) and radical prostatectomy (RP). METHODS: Male patients with localized prostate cancer (T1-T2, N0, M0) were identified in the SEER-Medicare database from January 1998 to December 2007. Patients were 66-74 years old, with andout-represented cancers and had PADT initiation or RP within 6 months after the first recorded diagnosis of prostate cancer in the dataset. PADT-treated patients were 1:1 matched to the RP-treated patients via propensity score (PS) matching. The overall survival from diagnosis to death was analyzed using Cox proportional hazard models; prostate cancer specific survival examined using Fine and Gray competing risk modeling. The independent regression variables included age at diagnosis, race, marital status, census regions, urban residence, clinical cancer stage, Gleason score, prostate specific antigen level, Charlson comorbidity index, calendar year at diagnosis, and hospitalization (yes or no), surgery (yes or no) and outpatient visit (yes or no) during one year baseline period. RESULTS: The PS-matched sample size was 3432 with mean age of 66.0 years. The baseline char-
anectotics were comparable between the two cohorts (all p-values >0.05). During median follow-up of 132.5 years, the cumulative incidence of death was 100% among 1716 FADT patients and 94 (5.48%) among 1716 RP patients, 66 (3.85%) and 2 (0.12%) for prostate cancer specific deaths, respectively. The FADT group had nearly 4 times higher overall mortality risk compared to those using RP (odds ratio (OR) = 3.534, 95% confidence interval (CI) = 2.801-4.664, p < 0.001). Furthermore, patients who received FADT had significantly higher prostate cancer specific mortality compared to those using RP (OR = 0.3875, 95% CI = 7.535-126.506, p < 0.001).

CONCLUSIONS: Overall mortality and prostate cancer specific mortality following FADT were significantly higher compared to those following RP among localized prostate cancer patients. These data do not support the use of FADT in men with clinically localized prostate cancer.

PC9
FROM INDIRECT EVIDENCE TO DIRECT EVIDENCE: A REAL-WORLD EXAMPLE FOR THE VALUE OF INDIRECT TREATMENT COMPARISONS IN SECOND-LINE NSCLC THERAPY
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Wallace S7
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OBJECTIVES: Often new treatment options lack comparisons to treatment options which already exist. The aim of this study was to evaluate the efficacy and safety of cetuximab in second-line treatment of NSCLC (1st, 2nd, 3rd lines) compared to the comparator treatment. The results are expressed as Hazard Ratio (HR), with the corresponding confidence interval (CI).

METHODS: We performed a systematic review, searching for randomized controlled trials that compared the different TT. The end point of interest was progression free survival (PFS). The results are expressed as Hazard Ratio (HR), with the corresponding confidence interval (CI).

RESULTS: We found 8 randomized controlled trials that fit our inclusion criteria. The results of the ICMA for PFS were: PZ versus SU [HR 0.59; CI 0.37 to 0.85]; PZ versus IFN [HR 0.75; CI 0.49 to 1.15]; PZ versus SO [HR 0.75; CI 0.51 to 1.14].

CONCLUSIONS: The results showed relative efficacy of TT, although there was a trend to confirm the superiority of SU.

PC9N
TARGETED THERAPY (TT) FOR FIRST LINE TREATMENT OF ADVANCED RENAL CELL CARCINOMA: A HISTORIC META-ANALYSIS (ICMA) on Clavien Grade 3c Adverse Events. A Systematic Review and Meta-Analysis
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OBJECTIVES: To evaluate the efficacy and safety of targeted therapy in first line treatment of advanced renal cell carcinoma.

METHODS: A systematic review and meta-analysis was performed. Inclusion criteria were: 1) randomized controlled trials comparing targeted therapy versus placebo for first line treatment of advanced renal cell carcinoma, 2) trials with >100 evaluable patients, 3) incidence of Clavien Grade 3c adverse events reported. The end point of interest was Clavien Grade 3c adverse events. Results are presented as Hazard Ratios (HR) with 95% confidence interval (CI)

RESULTS: A total of 12 randomized controlled trials were included (4 studies comparing sunitinib versus placebo vs. bevacizumab vs. placebo). The incidence of Clavien Grade 3c adverse events was significantly lower in the placebo arm versus the targeted therapy arm (HR 0.23, CI 0.15-0.36, p<0.001). The results were consistent across all subgroups defined by study design, baseline characteristics, and adverse event type.

CONCLUSIONS: Targeted therapy in first line treatment of advanced renal cell carcinoma is associated with a significantly higher incidence of Clavien Grade 3c adverse events compared to placebo. These findings highlight the importance of careful monitoring and management of adverse events in patients receiving targeted therapy.