interval [CI], (-14.89 to -3.89 minutes) (P = 0.0008); intraoperative blood loss (WMD, -12.41 mL; 95% CI, -18.20 to -6.62 mL) (P <0.0001); length of hospital stay (weighted mean difference [WMD], -1.23 days; 95% CI, (-1.68 to -0.78 days) (P <0.00001); and recovery time of intestine function (weighted mean difference [WMD], -2.96 days; 95% CI, (-5.20 to -0.72 days) (P =0.01). There were also significant differences in intraoperative complication rate (OR=0.23, 95% CI (0.06,0.87), P=0.03) and in postoperative complication rate (OR=0.11, 95% CI (0.02,0.62), P=0.01). **CONCLUSIONS:** This meta-analysis clearly demonstrates that compared with electrocautery, ultrasonic scalpel can statistically significant reduce operation time, intraoperative blood loss, length of hospital stay, recovery time of intestine function, intraoperative complication rate and postoperative complication rate in LC in Chines population. It evidences that in China, ultrasonic scalpel offers a wide range of clinically relevant advantages and all of these advantages have clear economic impacts in laparoscopic cholecystectomy.

PGI8

CLINICAL CHARACTERISTICS AND OUTCOMES OF CHRONIC HEPATITIS C (CHC) PATIENTS TREATED WITH NEWER DIRECT-ACTING ANTIVIRAL (DAA)-BASED REGIMENS FROM A LARGE US PAYER PERSPECTIVE

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OBJECTIVES: To describe current clinical characteristics and healthcare utilization of CHC patients treated with newer DAA-based regimens using claims-linked lab data from a large US health plan. **METHODS:** The Optum Research Database (ORD) with medical and pharmacy claims-linked lab data for commercially-insured patients and Medicare Advantage beneficiaries was used. Patients with CHC ≥18 years treated with simeprevir (SMV) and/or sofosbuvir (SOF) regimens after Nov2013 and with 6-months baseline health plan enrollment were followed from treatment initiation until Jun2014. ORD contained 123.1M cumulative lives as of Jun2014. **RESULTS:** 1,844 CHC patients were treated with SOF+RBV (33%) SOF +PEG+RBV (32%), SMV+SOF (29%) and SMV+SOF+RBV (6%) (n=51 were treated with other regimens and excluded from analysis). Less than half of patients had a cirrhosis diagnosis (37%). 24% had claims-based evidence of end-stage liver disease. Over half (65%) were male; 68% white and 14% black; mean age was 57.5 years (SD=9.5). One-third (33%) were Medicare beneficiaries; 67% were commercially insured. Mean treatment duration for completed regimens (n=339) was 10.7 weeks; over half of regimens had treatment durations of >11 to ≤15 weeks (57%). Among patients with genotype results available (n=597), 1a (51%) was most common, followed by 1b (18%) and 2 (17%). Approximately one-third of patients with liver function test results (n=658) had baseline advanced liver fibrosis (29% with APRI >1.5; 33% with FIB-4 >3.25). Significant variations in treatment regimen were seen across liver disease severity subgroups, including those with advanced liver fibrosis most often being treated with SMV+SOF and SOF+RBV. Healthcare resource utilization and cost per SVR will be examined when post-treatment outcomes data are available. **CONCLUSIONS:** The analysis provides current CHC treatment patterns in a large US payer database, evidence of potential variation in newer DAA treatment utilization by clinical characteristics, and suggests a significantly higher proportion of patients receiving SMV+SOF±RBV had advanced liver fibrosis.

PGI9

MEASURING THE EFFECTIVENESS OF EARLY INFLIXIMAB USE ON CROHN'S DISEASE HOSPITALIZATIONS USING HIGH-DIMENSIONAL DATA MINING ADJUSTMENT

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OBJECTIVES: Infliximab is associated with fewer Crohn's disease (CD)-associated hospitalizations in randomized efficacy trials. Testing the effectiveness of infliximab using administrative data is challenging because many clinical predictors (i.e., degree of inflammation) are not available in coded data. We aimed to examine the effectiveness of infliximab on CD-related hospitalizations adjusting for confounders using high-dimensional data mining. **METHODS:** A sample of CD cases was identified by at least two encounters for International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code 555 from all active duty U.S. military personnel with service between 2001 and 2012. CD is an exclusion criterion for enlistment resulting in an incident cohort. Outpatient Current Procedural Terminology (CPT) codes were used to identify early infliximab use (within 6 months of diagnosis). The outcome of interest was hospitalization after 6 months of diagnosis. We applied an algorithm to select confounding risk factors with a minimum prevalence of 0.04%. Univariable predictors with p<0.05 were eligible for the final multivariable selection model (inclusion threshold p<0.01). **RESULTS:** During a median of 2.04 years of follow-up, 10% of the 990 eligible patients used infliximab within 6 months of diagnosis, 30% were hospitalized within the first 6 months of diagnosis and 9% were hospitalized after 6 months. Early infliximab use was associated with an increased odds of hospitalization > 6 months (OR 0.76; 95% CI 0.26 – 2.21) after adjustment for 64 model-selected factors including number of encounters (OR 0.98), abdominal pain (OR 5.39) and CT scan (OR 5.76). **CONCLUSIONS:** In this incident cohort of CD, early use of infliximab was not associated with a statistically significant decreased in hospitalizations, although the direction of effect was similar to trial results. These findings indicate that high dimensional data mining adjustment is an option for modeling medication-outcome relationships.

PGI10

TREATMENT OF ACUTE APPENDICITIS IN GERMANY: RESULTS OF THE ANALYSIS OF A HEALTH INSURANCE CLAIMS DATABASE

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OBJECTIVES: In Germany children with appendicitis are treated by pediatric surgeons (PedSurg) as well as general surgeons (GenSurg). We analyzed the treatment and outcome of both surgical disciplines and the impact of numerous other factors. **METHODS:** Data were extracted from a major public health insurance claims database (~ 8 million clients) during a 3-year period (2010-2012). Patients aged 4-17 years with appendectomy were included. Logistic regression analysis for risk of a surgical complication within the first 180-postoperative days was performed. Complications were defined by ICD and OPS codes. **RESULTS:** 8,110 patients were analyzed (PedSurg: n=1,937; GenSurg: n=6,173). Laparoscopic appendectomy was performed significantly more frequently by GenSurg compared to PedSurg (79% vs. 61%). The complication rate during initial stay and the readmission rate for surgical complications were significantly higher in patients treated by PedSurg compared to those operated on by GenSurg (2.9% vs. 1.7% and 3.4% vs. 2.2% respectively, p<0.01). Logistic regression analysis revealed no differences between the two surgical specialities for the risk of surgical complications during the initial hospital stay and no differences for the risk of readmission for a surgical complication in younger patients (4-11 years). In contrast, the risk of readmission for surgical complications in adolescents (12-17 years) was significantly higher if the patient was operated on by PedSurg (p<0.01). The results showed that patients treated with laparoscopy had a significantly lower risk for developing surgical complications within the first 180 postoperative days than patients who underwent an open surgery (OR: 0.73, p<0.1). No differences were found for the variables geographical region and working day vs. weekendsurgery. **CONCLUSIONS:** With overall low complication and readmission rates after appendectomy this study revealed an excellent quality of care for appendicitis in Germany. However, the increased risk of readmission for surgical complications in adolescent patients operated by PedSurg deserves future investigation.

PGI11

ASSOCIATION OF HEPATITIS C VIRUS INFECTION WITH RISK OF CHRONIC KIDNEY DISEASE: SYSTEMATIC REVIEW AND META-ANALYSIS

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OBJECTIVES: A high prevalence of chronic kidney disease (CKD) in hepatitis C virus (HCV)-infected patients has been reported in Taiwan. By contrast, several studies in the United States (US) have not found an increased prevalence of CKD, suggesting a possible geographic variation. We systematically reviewed the literature to determine the risk of developing of CKD in HCV-infected individuals. **METHODS:** MEDLINE and PUBMED were searched to identify observational studies that had reported an association between HCV and CKD or end-stage renal disease (ESRD) through 2014. Quantitative estimates (hazard ratio (HR) or odds ratio (OR)) and the 95% confidence intervals (CI) were extracted from each study. Studies were systematically reviewed in accordance with PRISMA guidelines, and a random-effects meta-analysis was performed. **RESULTS:** Eleven studies evaluating the risk of developing CKD/ESRD in HCV-infected individuals (n=265714) compared to uninfected controls (n=1674104) were identified- 7 cohort studies and 4 cross-sectional studies. The average years of follow-up ranged from 2.1 to 7.4 years. Five studies were from the US and 6 were from Taiwan. The pooled HR of CKD/ESRD in HCV+ individuals from the cohort studies was significant at 1.36 [95%CI:1.13-1.58] whereas the pooled OR from the cross-sectional studies was not- 1.16 [95%CI:0.92-1.40]. The overall pooled risk ratio from the 11 studies indicated that HCV+ individuals had a 30% greater risk of developing CKD/ESRD compared to uninfected individuals: risk ratio 1.29 [95%CI:1.13-1.45]. Country-stratified analysis yielded a significantly increased risk between HCV and CKD in the Taiwanese subgroup (risk ratio=1.24 [95%CI:1.05-1.48]) but not among the US subgroup (risk ratio=1.23 [95%CI:0.92-1.54]). Egger regression revealed no evidence of publication bias. **CONCLUSIONS:** HCV infection is associated with a greater risk of developing CKD/ESRD compared to uninfected controls. This risk appears to be geographically linked with patients in Taiwan at higher risk for HCV related CKD/ESRD than those in the US.

PGI12

RISK OF LIVER TRANSPLANT IN TREATED VS. UNTREATED HEPATITIS C

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OBJECTIVES: To quantify liver transplant risk and mean total costs in treated versus untreated patients diagnosed with hepatitis C virus (HCV). **METHODS:** The sample included individuals with commercial or Medicare Advantage insurance, aged 19-89, with ≥1 HCV diagnosis or HCV treatment prescription claim between 1/1/2008 and 6/30/2013, excluding those diagnosed with hepatitis B. Patients were observed during their full post-index enrollment following date of transplant or first HCV diagnosis or prescription. Cox proportional-hazard regression approximated adjusted relative risk (aRR) of transplant in treated versus untreated individuals, controlling for age, gender, geographic location, Deyo-Charlson Comorbidity Index, RxRisk-V Score, and pre-index medical and pharmacy costs. Results were also generated by treatment adherence level based on proportion of days covered (≥80%, 50-79%, <50%). Mean total costs (plan- and patient-paid) were assessed over the observation period using generalized linear models with log link and gamma distribution. **RESULTS:** 93.7% (40,338/43,046) of the sample had no evidence of HCV treatment. Incidence of liver transplant was 0.79% in untreated and 1.77% in treated individuals. There was no evidence that HCV treatment was associated with lower risk of transplant (aRR=1.01, 95% confidence interval [CI] 0.80-1.50). Transplant risk in treated individuals did not vary by adherence (50-79% aRR=0.86 [95% CI 0.19-2.72]; <50% aRR=1.73 [95% CI 0.73-4.38]; reference group ≥80%). Transplant recipients incurred significantly higher mean total costs compared to those without transplant ($154,250 vs. $38,128, p<0.0001). Among transplant recipients, costs were higher for treated versus untreated patients ($237,949 vs $141,616, p<0.0001). **CONCLUSIONS:** Despite adjusting for covariates, there was no evidence that HCV treatment reduced risk of liver transplant, suggesting that treated patients may be sicker and have unmeasured confounders. However, within the treated group, there was no change in risk of transplant by level of adherence, underscoring the need for further evidence on liver transplant outcomes.