Abstracts

breast cancer risk, while 11.6% and 14.3% of respondents believed that they were at higher 5-year and lifetime risk of breast cancer as compared to an average woman, respectively. A low but significant correlation (0.167, p = 0.045) was found between respondents’ actual risk and perceived risk of breast cancer. A large proportion of women (42.6%) were not sure whether or not they would consume chemopreventive tamoxifen for breast cancer if advised by their doctor. Only 16.7% women expressed willingness to consume tamoxifen. No relationship was found between women’s perceived and actual risk of breast cancer and their mammography screening behavior or willingness to consume chemopreventive tamoxifen. CONCLUSIONS: Actual and perceived risk of breast cancer does not seem to be associated with their screening behavior or willingness to consume chemopreventive tamoxifen in this population. Relatively few women in this population may opt to consume chemopreventive tamoxifen for reducing their risk of breast cancer.

PCN18

OPIOID USE IN A LARGE NATIONAL HOSPICE POPULATION: EXAMINATION OF CANCER VERSUS NON-CANCER PATIENTS
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OBJECTIVES: To investigate opioid use in a large sample of hospice patients and examine differences in opioid use between cancer and non-cancer patients. METHODS: This project was conducted with ExcelleRx, a large hospice pharmacy provider which contracts with 15% of hospices throughout the US. Patients included were age 65 or older admitted to hospice between June 1, 2003 and December 31, 2003. Pharmacy data through June 30, 2004 was analyzed. Average daily opioid equivalent (ADOE) use was calculated for each patient by converting total opioid dispensed to morphine equivalents. Associations between demographic variables and clinical characteristics with opioid use were examined. Analysis of variance (ANOVA) was conducted to examine differences in opioid use between cancer and non-cancer patients. RESULTS: The sample consisted of 43,537 patients representing 4 diagnostic categories: cancer patients and non-cancer patients. Cancer patients and non-cancer patients were examined. Analysis of variance (ANOVA) was conducted to examine differences in opioid use between cancer and non-cancer patients. RESULTS: The sample consisted of 43,537 patients representing 4 diagnostic categories: cancer patients and non-cancer patients. Cancer patients and non-cancer patients were examined. Analysis of variance (ANOVA) was conducted to examine differences in opioid use between cancer and non-cancer patients. CONCLUSIONS: Differences in opioid use were noted, suggesting the need for further research on how to best deliver hospice services for this fragile population.

PCN19

VARIATIONS IN INPATIENT PROSTATE CANCER TREATMENT IN FLORIDA
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Prostate cancer is the most common cancer affecting American men and the second leading cause of cancer deaths in the US. African-American men have the highest prostate cancer incidence and mortality rates in the world. OBJECTIVE: The purpose was to investigate differences across racial groups in the disease state and treatment of men hospitalized for prostate cancer. METHODS: Data Source—Florida Agency for Health Care Administration (AHCA) hospital discharge data for 2002. Each record represents a patient discharge and includes patient demographics, diagnoses, procedures and charges for the stay. Study population includes all patients under 80 years old with a primary diagnosis of prostate cancer hospitalized in Florida during 2002. Analysis: SPSS was used to compare procedures, co-morbidities, and patient outcomes of discharge status, length-of-stay and total charges. Chi-Square tests and ANOVA were used to detect significant differences across racial groups. RESULTS: A total of 5444 men were included in the analysis. The average age was 64.5 years, with 73% of the patients Caucasian, 12% African-American, 11% Hispanic and 4% other races. Average length of stay was 3.3 days, costing about $23,000 per stay. Medicare was the primary payer for over 47% of the hospitalizations. Prostatectomy was performed on 81.5% of the patients with no significant differences across racial groups. Hypertension was reported in 41.5% of the patients, occurring significantly more in African American patients. On average, African Americans had significantly higher hospital charges and length of stay, yet were significantly younger than Caucasians. Finally, African Americans were more likely to have a discharge status of death than any other racial group. CONCLUSIONS: African American men hospitalized for prostate cancer have different experiences than men of other racial groups. Further research is necessary to determine why this disparity occurs and how it might be attenuated.

PCN20

A SYSTEMATIC REVIEW OF PHYSICIAN KNOWLEDGE AND PRACTICE PATTERNS REGARDING COLORECTAL CANCER SCREENING
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OBJECTIVE: Colorectal Cancer (CRC), when detected early, can be treated, reducing morbidity and mortality. In 1997, the American Cancer Society issued major revisions for CRC screening guidelines to include new research findings and improvements in testing accuracy. Research suggests that physicians do not always follow CRC screening guidelines; lack of knowledge about appropriate guidelines or guideline changes is often cited as a barrier. The aim of this systematic review was to examine studies measuring physician CRC screening knowledge and related practice patterns. METHODS: A tiered systematic search (1997–2004) was conducted for studies, irrespective of design, which were published in peer-reviewed journals through MEDLINE, Academic Search Elite, CancerLit, CINAHL, and PsycINFO databases. Tier 1 search combined keywords “knowledge” and “physicians” with “colorectal cancer screening” which identified 48 studies. Tier 2 search combined keywords “practice patterns” and “physicians” with “colorectal cancer screening” which identified 52 studies. Tier 3 was a review of papers identified in Tiers 1 and 2. Ten studies meeting the “knowledge” and “practice patterns” inclusion criteria were retained. RESULTS: Studies reported that a significant percentage of physicians were performing Fecal Occult Blood Test on stool samples obtained from Digital Rectal Examination, a method that often produces false results. Roughly half of physicians were reported to be performing screening tests without
adequate patient preparation in terms of dietary restrictions which could impede test accuracy. There were inconsistencies among physicians regarding when in a patient’s life to initiate screening, and at what age to discontinue screening. CONCLUSIONS: This systematic review of ten included studies reflected considerable knowledge gaps among physicians, which could contribute to reasons for inadequate screening rates. Provider education about CRC screening should emphasize guidelines regarding when to start screening, frequency rates for screening with given modalities, and particular techniques and precautions that should be used to perform screening.

**PCN21**

RETRANSFORMATION OF ESTIMATED LOG-TRANSFORMED COSTS WHEN THE ERRORS PRESENT HETEROSEDASTICITY

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OBJECTIVE: Log transformation reduces robustness by focusing on symmetry. It improves precision and it diminishes the outlier effect. One big disadvantage of log models is retransformation problems. Although smearing methods provide non-parametric way to transform estimated costs, it fails to adjust heteroskedasticity especially if the form of heteroskedasticity is not known. In this paper, we propose a method where we can apply transformation accounting for heteroskedasticity. We compare our results with smearing estimators and generalized linear model (GLM) estimators. METHODS: Two form of heteroskedasticity is considered: 1) The heteroskedasticity is known up to a multiple constant. We used generalized least squares (GLS) estimator for correcting heteroskedasticity: and 2) The form of heteroskedasticity is unknown. If this is the case, feasible GLS method is used. After correcting for heteroskedasticity, smearing estimates is applied for the transformed equations to do the retransformation. Medstat Market Scan data is used to show the application. Cost level estimators are compared: OLS estimation, smearing transformation assumed no heteroskedasticity, smearing transformation with heteroskedasticity, GLM estimators where the family is gaussian with logarithmic link function. RESULTS: Estimation methods yield that log scale residuals were heavy tailed. White Test suggested the presence of heteroskedasticity. The graph of squared residuals on disease stage shows that variance is increasing with an increased level of stage levels. Park test suggested that if GLM is chosen, gaussian family should be chosen. Comparisons of the retransformed costs yield that smearing transformation after accounting for least deviation yielded least minimum square errors. CONCLUSION: We attempted to solve the biggest disadvantage of log transformed cost estimation by proposing two stage estimation procedure where at the first stage GLS or feasible GLS is used to correct for possible heteroskedasticity (depending on the form of heteroskedasticity), at the second stage smearing method is applied to transformed equation.

**PCN22**

ESTIMATION OF CENSORED MEDICAL COUNT DATA

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OBJECTIVE: Censoring is common problem with medical count data. Estimation over only uncensored patients yields bias toward the patients who have shorter survival time since patients who have longer survival times are high likely to be censored. Standard survival analysis is not applicable since the number of visits during the study time and after censoring time is not independent. The objective of this paper is to propose a method, which can be applied to censored count data. METHOD: The proposed method first estimates the probability of censoring by using logit model. Then, second stage involves estimating weighted Poisson regression where weights are calculated as inverse of estimated probability of censoring. We show that the resulting estimators are consistent. Standard errors from second stage are not valid and should be adjusted for first stage estimation. We estimate the errors by using bootstrapping techniques.

RESULTS: Medstat Market Scan data is used as an application of the method. Total hospitalization days after a year of initial diagnoses is estimated. Patients who are diagnosed less than a year before the end of study period are considered as censored. After using inverse probability weighted poisson regression, we also estimate the total hospitalization days by dropping the patients whose visits are censored. A test is proposed to compare the coefficients. We found that the difference in coefficients are significant (p < 0.0004). CONCLUSION: This paper presents a method for testing and correcting for possible sample selection bias for cross sectional data. In our application we assessed the influence of explanatory variables, such as patient and clinical characteristics, on inpatient visits of asthma two years following diagnosis after accounting for possible selection bias due to censoring. We applied poisson and our proposed method and to show that failing to do the adjustments yield different estimators.

**PCN23**

RELIABILITY OF SPANISH-LANGUAGE HUI MEASUREMENTS IN SURVIVORS OF CANCER IN CHILDHOOD: AGREEMENT BETWEEN PATIENTS, PARENTS, AND PHYSICIANS

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OBJECTIVES: To assess inter-rater agreement of Health Utilities Index (HUI) measurements in survivors of cancer during childhood in Honduras, El Salvador, Nicaragua and Panama. METHODS: Patients and their parents completed a Spanish-language interviewer-administered HUI questionnaire. Physicians answered the Spanish-language self-complete questionnaire version. Primary analyses of agreement between patients and parents, and patients and physicians, for HUI3 single-attribute and overall health-related quality of life (HRQL) utility scores was measured using single-measure one-way intra-class correlation coefficient (ICC). Secondary analyses used the two-way mixed model ICC, Pearson’s r and concordance correlation coefficient. Differences in mean scores > 0.05 are considered clinically important. RESULTS: Of 211 patients surveyed (aged 3.4 to 25.8 years at time of study, 56% male), there were 191 patient/parent pairs of complete HUI assessments and 192 patient/physician pairs. There was moderate or better agreement (ICC > 0.41, p < 0.001) between both pairs of raters for vision, hearing, speech and ambulation. Agreement was less than moderate (ICC < 0.41) for pain (p < 0.01), cognition (p < 0.01) and emotion (p < 0.05). Statistically significant (p < 0.001) and clinically important differences were observed within both sets of paired groups for cognition and emotion, with lower mean scores for patients. For overall HRQL, agreement was moderate between patients and parents but less than moderate between patients and physicians. The mean overall HRQL score was significantly lower statistically (p < 0.01) and clinically for patients than both parents (diff = 0.094), and physicians (diff = 0.159). Secondary analyses yielded similar results. CONCLUSIONS: Parent and physician reports should not be considered interchangeable with patient assessments, especially for aspects of health not readily observable. There were important differences between patients and parents and physicians in emotion, cogni-