PCN53 RISK OF PERSONAL BANKRUPTCY FOLLOWING A CANCER DIAGNOSIS

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OBJECTIVES: Bankruptcy may be a particular concern for cancer patients. Costs from different domains including clinical, non-clinical, and non-medical costs such as lost income, can be financially devastating. We estimated the incidence of bankruptcy following cancer diagnosis using linked cases from the Washington SEER registry with Western District of Washington bankruptcy court records.

METHODS: Cancer cases were identified for 1995-2005. Our analyses were limited to cases reporting their first primary cancer, excluding cancers in situ or diagnosed at time of death. To determine the proportion of cancer cases reporting personal bankruptcy (Chapter 7 or 13) following cancer diagnosis, we generated cumulative incidence (CI) of bankruptcy, to allow for the competing risk of death. We calculated CI using competing events. When considering only the 3 European countries, the annual difference was EUR 724.

RESULTS: There were N=231,799 cancer cases; after a mean follow-up of 4.3 (±4.1) years, N=4805 (2.1%) had filed for bankruptcy after cancer diagnosis. Average age at diagnosis of filers was 52.8 (±13.6) years and 55% were female compared to 63.9 (±14.6) years and 48% for female cancer cases (p<0.0001 for both comparisons). Mean and median time to bankruptcy was 3.3 and 2.5 years, respectively. At 1, 2 and 3 years following diagnosis, the proportion of bankruptcy cases was 43%, 41%, and 36%, respectively. By 3 years, the incidence of bankruptcy was 1.3%.

CONCLUSIONS: One in 100 patients file for bankruptcy following a cancer diagnosis. Thyroid and uterine cancer have the highest incidence of bankruptcy. Factors associated with bankruptcy following cancer are yet to be determined.

PCN54 INJECTION OF LONG-ACTING SOMATOSTATIN ANALOGS: A COST CONSEQUENCE ANALYSIS IN FRANCE, GERMANY, THE UNITED KINGDOM AND THE UNITED STATES

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OBJECTIVES: Patients treated for neuroendocrine tumors and acromegaly have to be periodically injected with a long-acting somatostatin analog (SSA). This study aimed at evaluating the economic implications of using a new pre-filled device for Somatuline Autogel/Depot versus Sandostatin LAR. The study was performed in three European countries and the US. METHODS: A quantitative study was performed in France, Germany, the UK and the US, including 77 nurses. The majority of nurses were from hospital wards, specialized in endocrinology and oncology. The number of SSA patients per nurse was at least 3 per year. Time spent for each injection and number of clogging episodes was recorded per nurse and per type of injection (Somatuline new device or LAR). Cost of successful injection was calculated by adding all costs incurred with using the product and the device. RESULTS: With Somatuline new device and LAR, 2 clogging incidents were reported. This led to an average of 79 injections for the 3 European countries and the US. CONCLUSIONS: Thyroid and uterine cancer have the highest incidence of bankruptcy. Factors associated with bankruptcy following cancer are yet to be determined.

PCN55 RACIAL VARIATION IN THE COST-EFFECTIVENESS OF CHEMOTHERAPY FOR PROSTATE CANCER

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OBJECTIVES: Heterogeneity of treatment effects and variation in expenditures across racial/ethnic groups impairs the cost-effectiveness of health care interventions. This study investigates the variation in costs, effects, and incremental cost-effectiveness ratios (ICERs) associated with chemotherapy receipt in elderly metastatic (M1) prostate cancer (PC) patients across race/ethnicity subgroups (Non-Hispanic Whites, Non-Hispanic Blacks, Others).

METHODS: We examined patients aged 66 or older identified using linked Surveillance, Epidemiology and End Results (SEER) Medicare data, who were diagnosed with M1 PC between 2000 and 2005. Cost data based on Medicare reimbursements were available for 36 months after diagnosis. Mean costs and effects (life-years gained, LYG) were adjusted for censoring using Gray's method to compare bankruptcies among different cancers.

RESULTS: Mean costs and effects (life-years gained, LYG) were adjusted for censoring using Gray's method to compare bankruptcies among different cancers. There were N=4805 (2.1%) who had filed for bankruptcy after cancer diagnosis. Average age at diagnosis of filers was 52.8 (±13.6) years and 55% were female compared to 63.9 (±14.6) years and 48% for female cancer cases (p<0.0001 for both comparisons). Mean and median time to bankruptcy was 3.3 and 2.5 years, respectively. At 1, 2 and 3 years following diagnosis, the proportion of bankruptcy cases was 43%, 41%, and 36%, respectively. By 3 years, the incidence of bankruptcy was 1.3%.

CONCLUSIONS: Developing a three-state Markov model was performed to estimate health and economic consequences during a time horizon of 12 months (six-week cycles). Effectiveness measures were overall survival, progression-free survival (months), and quality adjusted life years gained (QALYs). Drug safety was also assessed (grade 3-4 adverse events- AE). Transition probabilities were obtained from a recent international published literature. Data of comparators were: temsirolimus (25mg/week) and interferon-α (N=1,380,000 US$/week). Resource use was obtained from Social Security Mexican Institute hospital records (n=154). Costs were extracted from institutional sources and include: hospitalization, drugs, medical procedures, laboratory tests and adverse events management. Probabilistic sensitivity analyses were performed and acceptance curves were constructed.

RESULTS: Temsirolimus overall survival resulted in 10.9 months (CI 95% 10.63 – 11.17) and interferon-α achieved 7.3 months (7.09 – 7.51) (p<0.05). For progression-free survival, temsirolimus estimation was 5.5 months (5.36 – 5.64) and interferon-α estimated 3.1 months (3.01 – 3.19) (p<0.05). Lastly, temsirolimus raised QALYs in 0.74 (0.72 – 0.76), (p<0.05), and diminished grade 3-4 hematologic AE in –9.59% (9.35% - 9.83%), (p<0.05). Incremental cost-effectiveness ratio (ICER) for overall survival and progression-free survival for temsirolimus versus interferon-α were USD$4,749 [US$4,718-US$4,781] and USD$275 [US$275-US$4,741], respectively. The ICER using QALYs resulted in USD$23,458 [US$22,869-US$24,046]. Probabilistic sensitivity analyses showed that results were robust.

CONCLUSIONS: Regarding overall survival, progression-free survival and QALYs temsirolimus represents a cost-effective therapy in Mexican patients who suffer metastatic renal-cell carcinoma and poor prognosis.

PCN57 ECONOMICS OF A MULTI-GENE ASSAY TO PREDICT RECURRENCE OF EARLY STAGE BREAST CANCER: EXPERIENCE OF A LARGE UNITED STATES INSURANCE PROGRAM

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OBJECTIVES: National guidelines recommend a 21-gene Recurrence Score (RS) to aid in adjuvant treatment decision in estrogen-receptor-positive, node-negative early stage breast cancer (ER+, LN-) to assess the economic implications of using a multi-gene assay in community practices from the payer’s perspective.

METHODS: Analysis of 952 women with ESBC enrolled with Humana, Inc. (Louisville, KY) tested with the 21-gene RS between June, 2006 and June, 2010. The proportion of women classified by the assay by RS categories, utilization and costs of chemotherapy regimens, supportive care, and costs of adverse events was obtained from Humana. We adapted a validated Markov model to compute the cost implications of RS for a representative patient. The probability of risk of recurrence, chemotherapy benefits and decision impact of RS were derived from published studies.

RESULTS: 255 patients within the tested population received adjuvant chemotherapy. Adjuvant chemotherapy was administered to 60% of patients at low risk, 36% of women at intermediate risk, and 72% of women at high risk of recurrence. Based on a meta-analysis in the reduction of chemotherapy after RS, the model estimated an average per patient test saving of $1,115. The immediate direct savings for adjuvant chemotherapy drugs and supportive care, and management of adverse events were $1,897, $2,593, $475, respectively. Prevention of recurrence through appropriate treatment of high-risk patients resulted in additional saving of $126.

CONCLUSIONS: The adoption of the 21-gene RS led to targeted management of women with ER+, LN- ESBC, and consequently save direct medical costs.

PCN58 THE CYPD26 GENETIC TEST IN COMBINATION WITH HORMONE THERAPY FOR ER+ HORMONE SENSITIVE WOMEN WITH EARLY BREAST CANCER COST-EFFECTIVE

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OBJECTIVES: Approximately 60% of breast cancer cases are a type sensitive to hormones. Tamoxifen is the most widely used treatment of hormone-dependent breast cancer. The pharmacological activity of tamoxifen is dependent on its concentration by the hepatic drug-metabolizing enzyme CYP2D6. Patients with reduced