uninsured were associated with higher mortality. **CONCLUSIONS:** The study found that men who received the following treatments received radiation only, hormone only, or a combination of both, with co-morbidity had lower survival benefit. Further, research that is focused on the specific cause of death may help understand the impacts of treatment and covariates on prostate cancer survival.

**Cancer – Cost Studies**

**PCN26**  
A BUDGET IMPACT ANALYSIS OF VINORELBINE INTRODUCTION ON CROATIAN POSITIVE DRUGS LIST IN BREAST CANCER TREATMENT  
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**OBJECTIVES:** Vinorelbine was not available in breast carcinoma treatment through the CNHI PDL. A specific clinical guideline for vinorelbine reimbursement based on a stable population and on different penetration and substitution rates of the CNHI PDL. **METHODS:** A specific clinical guideline for vinorelbine reimbursement based on evidence-based medical criteria and the main international guidelines. We have developed the budget impact analysis (BIA) model and calculated the number of patients who will be treated with vinorelbine in three-years’ period after the reimbursement following the proposed clinical guideline. The share of vinorelbine has been estimated using market data and the price of vinorelbine has been calculated according to the Croatian MoH Pricing Ordinance. The total costs for CNHI has been calculated using a referent scenario (without vinorelbine) and a scenario with vinorelbine reimbursement. Monte Carlo simulation has been performed too. **RESULTS:** The total number of patients who could be potential candidates for the vinorelbine treatment will be 203 per year. An average annual drug cost per patient is estimated at 628.50 USD. Monte Carlo simulation results in breast cancer treatment showed the cost of therapy for patients with surgically resected kit GIST with a high risk of recurrence has been shown to significantly improve recurrence-free survival (RFS) & overall survival (OS). Therefore the budgetary impact of treating patients with GIST with vinorelbine for 1 year after a 3 year horizon was assessed. A Markov model was developed to predict RFS recurrence and treatment costs. Patients enter the model after surgery and transition among three health states: free of recurrence, recurrence, & death. Monthly recurrence & mortality rates were derived from SGGVIII/AIO clinical & published literature. Number of eligible patients was estimated from Survival Epidemiology and End Results. Costs and discontinuation rates were estimated from trial and published sources. The budgetary impact was estimated by comparing health care costs for 3 years versus 1yr of IM and calculated as total & per member per month (PMPM) cost. Sensitivity analyses were conducted. **RESULTS:** The model estimated the budgetary impact of introducing 3yr imatinib in a hypothetical health plan of 10 million members with 36 surgically resected GIST incident patients. The model predicted that recurrence or death would be avoided in 9 additional patients. The net budgetary impact per patient per month would be $1090 in years 2 and $2574 in year 3, and cost – $0.01 PMPM in years 2 & 3. Treatment with 3 years IM would increase the budget by 15% in year 2 and 28% in year 3. Model results at yr 3 were sensitive to cost of imatinib and recurrence rates. **CONCLUSIONS:** Treatment with 3 years of imatinib has been shown to be cost-effective in treating RFS and OS. More importantly, the cost of the treatment of everolimus and exemestane was projected to be 10% at the end of the first year after everolimus entry, and was assumed to increase to 17% at the end of 3 years. The total budget impact is relatively small.

**PCN29**  
BUDGET IMPACT ANALYSIS OF MELANOMA TREATMENT IN MEXICO  
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**OBJECTIVES:** In Mexico, melanoma represents approximately 8% of the total number of cases of skin cancer, becoming the third most common skin cancer, behind basal cell carcinoma and squamous cell carcinoma. There are few published studies describing the cost of care for patients with melanoma in Mexico. The objective of this study is to estimate the budgetary impact on the total cost of treatment for melanoma in Mexico, on the perspective of the Social Security Mexican Institute (IMSS) the most important health institution, serving more than 55 million people in Mexico. **METHODS:** In order to obtain the prescriptive habits for the treatment of melanoma and the direct costs (including chemotherapy, radiation therapy, surgery, assessment of the patient, laboratory and diagnostic studies), we conducted 10 semi-structured face to face interviews with oncology specialists from IMSS. Epidemiological indicators like incidence, prevalence and mortality were obtained from a systematic review of national and international literature. We consider beneficiaries of the IMSS as the target population of this study. The distribution for the small sample was obtained using a non-parametric bootstrap approach. As result, we get patients with melanoma who sought care and which were correctly diagnosed in stages 3 and 4 of the disease, that is, those who recommend to receive chemotherapy. The budgetary impact on the total cost of treatment for melanoma in IMSS represents 0.15% of total budget expenditure in 2010 ($ 2,900,564 million dollars). **CONCLUSIONS:** The budgetary impact of the treatment of melanoma in IMSS represents 0.16% of total budget expenditure in 2010 ($2,900.56 million dollars).

**PCN30**  
DEVELOPING BUDGET IMPACT MODEL FOR RARE DISEASES: CASE IN POINT OUTCOME OF T-CELL LYMPHOMA  
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**OBJECTIVES:** Develop budget impact model to forecast total cost of treatment for cutaneous T-cell lymphoma (CTCL) from the public and private payer perspective. The clinical efficacy and safety data were obtained from the published pivotal study results. Costs of adverse events were estimated based on claims database analysis, AHQR’s HCUP and CMS Medicare 2009 databases. Drug cost was estimated based on 2011 AWP price. Epidemiology data were obtained from NC1-SEER and CDC databases. A budget impact model was implemented over a period of five years, based on a stable population and on different penetration and substitution rates of newly approved therapy. Model was developed in excel based format. Blinded Model design and outputs were tested with payers and KOL’s. **RESULTS:** For rare cancers such as CTCL, the budget impact of treatment with targeted cancer therapies is in the range of $600,000-$50,000 per 1 million covered lives. The per patient per payer (PFPF) budget impact of this treatment is 46-53 cents. US payers rated PFPF output as the one of the most important relevant outputs of the model. **CONCLUSIONS:** This budget impact model shows that new treatments for rare forms of cancer are likely to have minimal budget impact on payers. PFPF based outputs are more relevant to payers, than per patient treatment costs. However, an emerging concern is the total budget impact of all therapies indicated for ultrarare disorders, which might be an important consideration for future models.

**PCN31**  
ECONOMIC EVALUATION OF AZATIDINONE FOR THE TREATMENT OF MYELODYSPLASTIC SYNDROMES (MDS) IN THE BRAZILIAN PUBLIC HEALTH CARE SYSTEM (BRSS)  
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**OBJECTIVES:** MDS is an incurable and rare hematological disease that affects for the production of blood cells. Two hypomethylating agents for the treatment of MDS are available in Brazil: azacitidine (AZA) and decitabine (DCC). Our task was to...
compare the costs and outcomes of azacitidine (75 mg/m² per day for 7 days every 4 weeks) vs. decitabine (65 mg/m² per day for 4 to 7 days every 6 weeks) from the perspective of SUS. METHODS: We developed a Markov model to determine the cost-effectiveness (C/E) and 3-year budget impact of introducing AZA in the Brazilian market. Patients were classified according to the ICHS Int 1, Int 2, and High Risk. The model considered progression to acute myelogenous leukemia (AML) and death as the main outcomes for each category. Sensitivity and cost-effectiveness comparisons were obtained from a systematic review of literature and public sources. The costs of adverse events and progressive disease were also included. A sensitivity analysis was performed to test the robustness of the results. The currency conversion used was BR$1 = US$1.0. RESULTS: The cost-effectiveness analysis showed the results for AZA compared to DEC resulting in lower costs and improved outcomes with respect to mortality rates progression to AML. Over a 3-year time period, the use of AZA was associated with a savings of BR$85,000 (US$45,000) compared to DEC. Assuming that AZA at the BR$15,000 dose is given to 50% of patients with MDS in Brazil, it would have a budgetary impact of BR$45,000,000 (US$25,000,000) for the public health care system SUS. CONCLUSIONS: When compared to DEC, AZA showed improved outcomes and lower costs as a treatment option for MDS in the Brazilian public health system.

PCN34

DESCRIPTIVE COSTS OF CHEMOTHERAPY TREATMENT FOR STAGE 3 AND STAGE 4 COLON CANCER

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OBJECTIVES: The National Cancer Institute (NCI) estimates that cancer accounted for approximately $124.57 billion dollars in direct costs in the United States in 2010. NCI provides cost estimates on the initial, continuing and last ‘phase of care’ but does not provide a breakdown by stage. This study aims to describe the costs of chemotherapy treatment for stage 3 (S3) and stage 4 (S4) colon cancer (CC). Data from 1997-2005 of the Surveillance, Epidemiology, and End-Result-Medicare database was used for this analysis. Individuals included were those diagnosed as having AJCC S3 or S4 CC. Analyses excluded individuals who were not eligible for Medicare Parts A and B or those insured by Medicare HMO. Areas under the curve (AUC) for direct medical costs were summed over a 40 week period, from time of diagnosis. Costs contributed were from beneficiaries who died from S3 and S4 CC and were ever treated with chemotherapy. Costs were summed for S3 and S4 individuals with at least 26 weeks of initial chemotherapy treatment. RESULTS: These analyses identified 3549 Individuals with S3 CC and 8194 individuals with S4 CC. Over the 40 week observation period, the AUC for S3 and S4 CC was $52,145 and $45,106, respectively. Mean weekly costs peaked at week 31 for S3 CC ($4324) and at week 29 for S4 CC ($1,725). Among S3 and S4 individuals with at least 26 weeks of initial chemotherapy treatment, S3 chemotherapy treatment was associated with stage 3 (S3) costs of $45,106, $49,874, and $85,000 for S4 CC. CONCLUSIONS: Individuals who died from S3 or S4 CC and were ever treated with chemotherapy, the costs associated with S3 cancer exceed those of S4 cancer over the 40 week observation period. Among those with at least 26 weeks of initial chemotherapy and treatment, S3 chemotherapy treatment is less expensive than S4 chemotherapy treatment.

PCN35

EPOETIN ALFA AND DARBEPOETIN ALFA DOSING PATTERNS AND COSTS IN CHEMOTHERAPY-INDUCED ANEMIA HOSPITAL OUTPATIENTS

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OBJECTIVES: This retrospective claims analysis aimed to compare erythropoiesis-stimulating agent (ESA) dosing patterns and costs in chemotherapy-induced anemia (CIA) hospital outpatients. METHODS: Electronic records from the Premier hospital database (2006Q1-2011Q1) were used to identify outpatients aged ≥18 years that had a diagnosis for cancer, received chemotherapy during hospitalization, and received epoetin alfa (EPO) or darbepoetin alfa (DARB). Exclusion criteria were: diagnosis of chronic kidney disease, diagnosis of myelodysplastic syndrome, receipt of renal dialysis, or receipt of both ESAs. The observation period consisted of the outpatient continuous ESA episode, defined as the period from first to last outpatient visit with ESA use without a gap of more than one calendar month between ESA visits. The ESA dose ratio (Units EPO: mcg DARB) was calculated using the mean cumulative dose of EPO and DARB. ESA treatment costs were determined using cumulative dose and December 2010 wholesale acquisition costs. RESULTS: A total of 7413 outpatient ESA episodes (EPO: 3979; DARB: 3434) were identified. The EPO group had a lower proportion of females versus the DARB group (61.7% vs. 67.7%, respectively; P = 0.008). Overall survival was not significantly different for PC vs BCG (hazard ratio [HR] = 0.93; 95% CI: 0.78 to 1.11, p = 0.040). The total estimated costs were $50212 lower for PC than BCG. The cost savings for the PC regimen were predominately due to lower pharmacy-related drug costs ($10510 vs. $30121). CONCLUSIONS: PC had lower estimated costs and less serious toxicity compared to BCG and produced at least comparable survival outcomes.

PCN36

EPOETIN ALFA AND DARBEPOETIN ALFA DOSING PATTERNS AND COSTS IN CHEMOTHERAPY-INDUCED ANEMIA INPATIENTS

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