important epidemiological and economic burden, literature on cost of chemotherapy in breast cancer is rather scarce in Germany. The objective of this study was to estimate the cost of chemotherapy for early stage breast cancer in Germany, using two different perspectives: the sick funds and the society. METHODS: A semi-systematic search of the literature was conducted to identify relevant articles describing the cost of adjuvant chemotherapy in Germany. The electronic databases PubMed, SonoMed, and a comprehensive collection of congress databases were searched. Combinations of search terms designed to identify publications describing cost of adjuvant chemotherapy in early stage breast cancer patients. Searches were limited to those published in the English and German language between January 2000 and April 2011. A retrospective multicentre study was conducted to evaluate adjuvant chemotherapy costs. RESULTS: A total of 51 patients were included in the study. The following adjuvant chemotherapy regimens were given to the patients: TAC (22%), FEC (20%), FEC-DO (10%), TC (20%), EC, DOC/PAC (12%) and others (8%). The average total costs for an adjuvant chemotherapy treatment was estimated to be €1,104.60 in a sick fund perspective and €1,190.12 in a societal perspective. The direct costs were €572.28 for chemotherapy drugs, €982.42 for chemotherapy administration and monitoring, €422.84 for supportive drugs and management of adverse events. The indirect costs of sick leaves were €516.37. CONCLUSIONS: Adjuvant chemotherapy in breast cancer represents a significant economic burden to the health care system and the society.

PCN56 ARE OUT-OF-POCKET PAYMENTS FOR ORAL ONCOLOGIC THERAPIES TOO HIGH? UPDATED RESULTS FROM A U.S. CLAIMS DATA ANALYSIS Rabon ML1, Pelletier EM2, Smith DB2, Reyes CM1

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OBJECTIVES: Oral oncologic therapies increasingly are becoming part of treatment options for cancer. These agents often fall within the pharmacy benefit, with the potential for increased out-of-pocket payments (OOPP) for patients. This study evaluated the patient OOPP for oral oncologic therapies in US managed care. METHODS: Patients aged ≥18 years with 1 or 2 oral oncologics (alitretinoin, bexarotene, capetibamine, cyclophosphamide, dasatinib, erlotinib, etoposide, everolimus, gefitinib, imatinib, isotretinoin, lapatinib, lenalidomide, leucovorin, nilotinib, sorafenib, trastuzumab) were identified from 2006-2010 in a database of over 57 HMOs. OOPP were calculated as the allowed amount (dollars a health plan allows for a therapy, including member liability) minus the paid amount (dollars paid by a health plan for a therapy). Mean/median per-claim OOPP were reported for each oral therapy and stratified by geographic region, health plan type, and payer type. RESULTS: A total of 17,483 patients with at least 1 oral oncologic were identified in 2009. Mean age was 38 years, 44% were male, and 85% had a commercial payer. Per-claim OOPP for the 22 oral oncologics varied. Median OOP ranged from $0 (alitretinoin) to $42 (bexarotene); average OOP were $9 (leucovorin) to $523 (dasatinib). Overall, 79% of patients were paying $50 or less per claim; 13% were paying $100 per claim. Asian patients (15%) had the lowest average OOPP ($65), followed by Hispanic patients (13%) and white patients (12%). CONCLUSIONS: OOPP for oral oncologic medications in the US are high, especially for Medicare patients. OOPP for most oral oncologics exceeds what patients are willing to pay for these therapies and varies by geographic region, plan type, and payer type.

PCN57 COST OF TREATMENT OF MULTIPLE MYELOMA IN UKRAINE Mandrik O1, Zalis’ka O2, Severens JL3

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OBJECTIVES: The major aims of the current research are to learn the average costs of treatment of multiple myeloma (MM) in Ukraine. According to the world statistics 30 new cases are registered annually per 1 million of population. In Ukraine there are 4,434 cases of MM registered; these patients receive compensation by the government for only limited amounts of necessary medicines, with most medicines being paid for by patients themselves. METHODS: A database containing records from hospital cards (2006-2010) for patients with MM was adapted to the MS Excel. A static population model developed in MS Excel was adapted to the MR setting. The model estimated the annual number of cases of at least one of the four opioids. The total healthcare expenditure with these patients was $5,343,890,502.91 ($11,036.72/patient/year). Around 53% of these patients (157,104) made concomitant use of oncology treatments, representing around 74% of the total costs ($2,424,503,643.76), with an average cost of $5,132.48/patient/year. The remaining patients (136,814) had an average cost of $5,989.06/patient/year. Within the oncology population group, the total healthcare expenditure with the four opioids alone was $5,203,001.81. Fentanyl was the most commonly used opioid in about 66% of patients, followed by morphine (33%), methadone (1%) and oxycodone (0.8%). Around 17% of the oncology patient population made use of two or more opioids during the study period. CONCLUSIONS: Pain treatment of oncology patients is more costly for private payers in Brazil when compared with patients not receiving oncological treatment. Although 47% of patients were considered non-oncological, this is not certain as they could have received oncological treatment outside the study period or in a provider not covered by the database (e.g. public hospitals). Additionally, 17% of patients received two or more opioid treatments with the 12 month period suggests opioid rotation is common.

PCN59 ECONOMICS OF PRIMARY PROPHYLACTIC G-CSF USE IN PREVENTING NEUTROPHIN IN ELDERLY BREAST CANCER PATIENTS RECEIVING CHEMOTHERAPY: ARE SHORT-TERM INCREASE IN COSTS NECESSARILY BAD? Rajan SS1, Lyman GH2

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OBJECTIVES: Chemotherapy is vital for breast cancer treatment, but early-onset toxicities like neutropenia hinder chemotherapy administration, especially in the elderly. Neutropenia also increases costs due to hospitalizations and aggressive systemic antibiotic administration. Primary prophylactic (PP) use of granulocyte-colony stimulating factors (G-CSF) helps prevent neutropenia. However, evidence supporting the cost-effectiveness of G-CSF is not conclusive and ASCO guidelines state the need for establishing cost-savings in high-risk groups like the elderly. This study examined the effect of G-CSF-CSF administration at the start of first-course chemotherapy on Medicare costs during the year following the start of chemotherapy. METHODS: A retrospective observational cohort study of patients newly diagnosed with breast cancer, between 1994 to 2002, was conducted using the SEER-Medicare. To account for non-random nature of observational data, a covariate genetic matching technique was used to pre-process the data before performing a propensity score regression analysis to estimate the effect of using G-CSF-CSF. Logarithm of cost was used as the dependent variable. RESULTS: Administration of G-CSF during the first course of chemotherapy was associated with 57% increase in costs during the study period, despite an 11% drop in neutropenia hospitalization costs. Forty-one percent of the increase in costs is due to increase in chemotherapy costs during the year after the start of chemotherapy. CONCLUSIONS: A significant part of increase in immediate medical costs in breast cancer patients receiving PPG-CSF is due to the improvement in chemotherapy administration. Thus the increase in short-term costs are not necessarily bad in patients receiving PPG-CSF. Adequate chemotherapy administration during the first year of breast cancer therapy has long been established to prevent future recurrences, reduce mortality and reduce long-term breast cancer care costs. Accounting for long-term survival, costs like neutropenia and neutropenia prevention, indirect patient care costs, and quality of life aspects, is extremely vital for cost-anales in chronic diseases like breast cancer.

PCN60 ECONOMIC EVALUATION OF VACCINATION AGAINST CERVICAL CANCER IN THE MOSCOW REGION Shakhavatova K1, Nemazova-baranova L2, Kranskopoltypy2 V3, Zarochenetsova M2, Kosachenko VP4, Demarteau N5, Shichurov D5

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OBJECTIVES: To estimate clinical outcomes and cost-offset (cost-benefit) from a societal perspective expected from human papilloma virus (HPV) vaccination in the Moscow region (MR). METHODS: A static population model published in MS Excel was adapted to the MR setting. The model estimated the annual number of abnormal Papacolaoulou smear test (abnormal PAP), precancerous lesions (cervical intraepithelial neoplasia (CIN)) and cervical cancer (CC) as well as costs (RUB) as...