results were higher in the UK than in the Netherlands and Germany, and highest in the US. The percentage of patients receiving 2nd line treatment varied between countries, with a higher proportion in the US compared to the Netherlands and Germany.

Conclusions: The percentage of patients receiving 2nd line treatment varies between countries, with a higher proportion in the US compared to the Netherlands and Germany. This variation may be due to differences in access to specialist care and patient preferences.

PCN51 ECONOMIC BURDEN OF HPV-RELATED HEAD & NECK AND ANAL CANCERS IN GERMANY

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Objectives: Data on economic burden of head & neck (H&N) and anal cancers in Germany is scarce. Human papillomavirus (HPV) infection is likely to be responsible for 16% to 72% of H&N cancer, and 84% of anal cancer. This study aimed to assess the annual management costs (hospitalisations, inpatient rehabilitation, sickness benefits) associated with these HPV-related cancers from the German Statutory Health Insurance (SHI) perspective.

Methods: This study was based on the retrospective analysis of four German databases, which cover hospitalisations (German Federal Statistical Office-DesStat), major categories of treatment such as surgery, radiotherapy and medical (Institute for the Hospital Remuneration System-InEK), inpatient rehabilitation (German Public Pension Insurance-DVR) and sickness leaves (Local Social Funds, Federal Ministry of Health). Associated health care resource use, and costs were identified and extracted using ICD-10 codes (H&N cancer: C01-C06, C09-C14, C32, anal cancer: C21). The HPV-related cancer total cost was estimated based on the percentage of each cancer and analysed to be attributable to HPV. Results: In 2008, 69,631 hospitalisations for H&N and anal cancers were reported (92% to H&N cancer), whereas the number of inpatient rehabilitations and sickness leaves were 5,415 and 18,391, respectively. The estimated total cost associated with HPV-related H&N and anal cancers was €511 million, mainly represented by H&N cancer (74%). Hospitalisations, inpatient rehabilitations, and sickness leaves, accounted for 82%, 4%, and 15% of total HPV-related cost, respectively.

Conclusions: The estimated annual cost of HPV-related H&N and anal cancers contribute to a significant economic burden in Germany, which is an important issue to be addressed in future studies. The economic burden associated with HPV-related cancers should be considered when assessing health and economic benefits of HPV vaccination in both genders. Further, this cost is likely to be underestimated since outpatient management cost is not included, and may be significant for these cancers.

PCN54 HOSPITAL COSTS RELATED TO HEPATITIS C VIRUS INFECTION: FIRST ANALYSIS OF THE FRENCH HOSPITAL NATIONAL DATABASE

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Objectives: There are approximately 4 million of Hepatitis C Virus (HCV) carriers in Europe. HCV infection is a leading cause of liver cirrhosis (LC), transplantation (LT), and hepatocellular carcinoma (HCC). On the brink of new antiviral treatments in France, we are currently evaluating the impact of the new companies in HCV care on the French health system. The purpose of this study was to analyse the economic burden of HCV in terms of healthcare resource use and costs. The present study represents the first analysis of the French national hospital database related to HCV.

Methods: This study was based on the retrospective analysis of four German databases, which cover hospitalisations (German Federal Statistical Office-DesStat), major categories of treatment such as surgery, radiotherapy and medical (Institute for the Hospital Remuneration System-InEK), inpatient rehabilitation (German Public Pension Insurance-DVR) and sickness leaves (Local Social Funds, Federal Ministry of Health). Associated health care resource use, and costs were identified and extracted using ICD-10 codes (H&N cancer: C01-C06, C09-C14, C32, anal cancer: C21). The HPV-related cancer total cost was estimated based on the percentage of each cancer and analysed to be attributable to HPV. Results: In 2008, 69,631 hospitalisations for H&N and anal cancers were reported (92% to H&N cancer), whereas the number of inpatient rehabilitations and sickness leaves were 5,415 and 18,391, respectively. The estimated total cost associated with HPV-related H&N and anal cancers was €511 million, mainly represented by H&N cancer (74%). Hospitalisations, inpatient rehabilitations, and sickness leaves, accounted for 82%, 4%, and 15% of total HPV-related cost, respectively.

Conclusions: The estimated annual cost of HPV-related H&N and anal cancers contribute to a significant economic burden in Germany, which is an important issue to be addressed in future studies. The economic burden associated with HPV-related cancers should be considered when assessing health and economic benefits of HPV vaccination in both genders. Further, this cost is likely to be underestimated since outpatient management cost is not included, and may be significant for these cancers.

PCN55 THE ECONOMIC BURDEN OF ADJUVANT CHEMOTHERAPY IN GERMANY

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Objectives: In Germany, breast cancer is the most frequent cancer. In 2007, 7.2% of total German health care expenditure was spent on breast cancer. Despite, its
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 in 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 chemotherapy in Germany. The electronic databases of Cochrane, Ovid, and Medline were searched in combination with 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 calculate cost of chemotherapy related resources used. Unit costs were collected from public sources (EBM catalogue, Rote list, DRG list). Cost items included: chemotherapy drugs, monitoring and administration, prevention and management of adverse events, transport costs, hospital stay, and invasive diagnostic procedures. 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+DOX (20%), TC (20%), EC (12%), and others (8%). The average total cost for an adjuvant chemotherapy estimate was calculated to be €1,106,956 in a sick fund perspective and €1,16,919 in a broader societal perspective. The direct costs were €572,2 for chemotherapy drugs, €892 for chemotherapy administration and monitoring, €428 for supportive drugs and management of adverse events. The indirect costs of sick leaves were €5163. 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

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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 plans.
METHODS: Patients aged 18–years with 1 of 22 oral oncologics (altretamine, bexarotene, capecitabine, cyclophosphamide, dasatinib, erlotinib, etoposide, everolimus, gefitinib, imatinib, irinotecan, lapatinib, lenalidomide, leucovorin, nilotinib, sorafenib, temozolomide, thalidomide, toxadroxacin, treosulfan, troglitazone, uracil/tegafur) were identified from 2009-2011 in a nationally-representative medical and pharmacy claims database of over 100 US health plans. 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 OOPP ranged from $0 (altretamine) to $42 (bexarotene); average OOPP were $29 (leucovorin) to $523 (dasatinib). Overall, 79% of patients were paying $50 or less per claim; 13% were paying >$100 per claim. Among the majority of therapies, the highest average OOPP were found in the Northeast and South. PPO and indemnity plans had the highest OOPP for almost two-thirds of the therapies. Medicare Risk (private Medicare) and self-insured patients had higher OOPP for most therapies compared to commercial payers and Medicaid. CONCLUSIONS: OOPP in the United States differ among oral oncologic options and confirm previous findings. As costs for cancer treatment become a greater part of treatment decisions, an understanding of the cost burden to patients will be critical in informing choices.

PCN7 COST OF TREATMENT OF MULTIPLE MYELOMA IN UKRAINE

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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, there are 4,434 cases of MM registered; these patients receive compensation by the Ukraine National Medical Healthcare Fund. 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 population in MS Excel was adapted to the MR setting. The model estimated the annual number of abnormal Papillomavirus smear test (abnormal PAP), precerescious lesions (cervical intraepithelial neoplasia (CIN)) and cervical cancer (CC) as well as costs (RUB) as shown that treatment of MM with bortezomib, even though involving only a small number of patients, and treatment of MM-related conditions within the majority of MM patients takes the major part of total costs.

PCN58 THE COST OF STRONG ORION TREATMENT OF ONCOLOGICAL PAIN IN THE BRAZILIAN PRIVATE HEALTH CARE SYSTEM

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OBJECTIVES: To estimate the cost of treatment of oncological pain with four strong opioids (methadone, morphine, oxycodeone, fentanyl) in the Brazilian private healthcare system between January and December 2010. METHODS: A claims database of over 57 HMOs was analyzed to recover combined use of strong opioids and oncological treatments between January and December 2010. Results showed dependence with medication use, analysis and diagnostics. RESULTS: Over the one-year study period, 293,918 patients made use of at least one of the four opioids. The total healthcare expenditure with these patients was R$ 3,243,890,502.91 ($11,656.72/patient/year). Around 55% of these patients (157,104) made concomitant use of oncological treatments, representing around 74% of the total costs ($2,424,503,674.76), with an average cost of $15,432.48/patient/year. The remaining patients (136,814) had an average cost of $5,989.06/patient/year. Within the oncology population, the total healthcare expenditure with the four opioids alone was $5,203,631.81. 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 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 HMO (e. public healthcare). Around 17% of oncological patients receiving two or more opioid treatments with the 12 month period suggests opioid rotation is common.

PCN59 ECONOMICS OF PRIMARY PROLYMPHOCYTIC G-CSF USE IN PREVENTING NEUTROPENIA IN ELDERLY BREAST CANCER PATIENTS RECEIVING CHEMOTHERAPY: ARE SHORT-TERM INCREASE IN COSTS NECESSARILY BAD?

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OBJECTIVES: Chemotherapy is vital for breast cancer treatment, but early-onset osteoporosis like neutropenia hinder chemotherapy administration, especially in the elderly. Neutropenia also increases costs due to hospitalizations and aggressive systemic antibiotics 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 guideline lines state the need for establishing cost-savings in high-risk groups like the elderly. This study examined the effect of G-CSF administration at the start of first-course chemotherapy on Medicare costs during the year following the start of chemotherapy, as an observational experience. METHODS: A database containing parametric regression analysis to estimate the effect of G-CSF on Medicare costs during the year following the start of chemotherapy. In costs during the study period, despite an 11% drop in neutropenia hospitalization costs, a 15% increase in the immediate medical costs in breast cancer patients was observed. This study showed that G-CSF administration at the start of chemotherapy did not seem to produce significant cost-savings. CONCLUSIONS: G-CSF administration at the start of chemotherapy does not necessarily reduce costs in breast cancer patients. Due to the high cost and limited evidence supporting its use, this medication should be used judiciously.

PCN60 ECONOMIC EVALUATION OF VACCINATION AGAINST CERVICAL CANCER IN THE MOSCOW REGION

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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 population in MS Excel was adapted to the MR setting. The model estimated the annual number of abnormal Papillomavirus smear test (abnormal PAP), precerescious lesions (cervical intraepithelial neoplasia (CIN)) and cervical cancer (CC) as well as costs (RUB) as