

for France and Germany in year 1 and 2, were €502 - €126 for France; €1,429 - €1,156 for Germany. Total costs reached €18,024 (yr1), €7,039 (yr2) France; €19,025 (yr1), €13,295 (yr2) Germany; €15,785 (yr1), €1,990 (yr2) England. Two-year costs totalled €25,063 (France); €32,500 (Germany); €17,777 (England). Subgroup analyses showed higher costs for elderly patients, those with non-metastatic disease and smokers. **CONCLUSIONS:** Considerable differences in average treatment costs were observed. In-patient costs dominate in the first year of treatment in all countries. The study highlights the costly nature of NSCLC.

#### PCN86

##### COST OF BEST SUPPORTIVE CARE FOR NON-SMALL CELL LUNG CANCER PATIENTS – A GERMAN PERSPECTIVE

Schmidt U<sup>1</sup>, Lipp R<sup>2</sup>, Drechsler M<sup>1</sup>

<sup>1</sup>Boehringer Ingelheim Pharma GmbH & Co. KG, Ingelheim, Germany, <sup>2</sup>GermanOncology, Hamburg, Germany

**OBJECTIVES:** Best supportive care (BSC) is in general individually provided to patients. Thus, the scope of BSC and its costs can vary widely. Only limited information on BSC costs for patients with non-small cell lung cancer (NSCLC) exists. Aim of this research was to estimate annual BSC costs for NSCLC patients in Germany. **METHODS:** To estimate BSC costs at first a literature search in PubMed with the key words “best supportive care”, “cost”, “non-small cell lung cancer” and “economic analysis” individual and combined search terms was performed. International publications of economic evaluations including data on single cost items which could be applied to the German health care system were included. Additionally, data on BSC from a NSCLC patient registry (n=193) and prescription data derived from a randomised controlled trial (RCT) were used as further references. Cost- items were extracted from each reference and finally applied to the German inpatient and outpatient reimbursement system. **RESULTS:** The literature research yielded 317 records of which 3 met the inclusion criteria (2=UK; 1=North America). An extrapolation of these evaluation results to the German health care system showed that BSC costs based on UK data ranged from 16,940€ to 45,426€ (North America: 31,352€). According to health economic data from an RCT annual cost for BSC amounted to 17,531€, while data from a NSCLC patient registry added up to 28,070€. The average annual costs for BSC were estimated at 27,864€. **CONCLUSIONS:** Since BSC is individually delivered to patients, it leads to a high variance of annual BSC costs for NSCLC patients in Germany. Furthermore, international economic evaluations were extrapolated to the German health care system. Hence, results should be interpreted with caution as international treatment guidelines and reimbursement schemes are not fully applicable to Germany. Future analyses should be based on a German population only.

#### PCN87

##### MASTECTOMY DUE TO BREAST CANCER IN BRAZIL: GEOGRAPHIC DISTRIBUTION AND COSTS FROM THE PUBLIC HEALTH CARE PERSPECTIVE

Valle PM<sup>1</sup>, Mosegui GBG<sup>2</sup>, Vianna C<sup>1</sup>, Araujo RL<sup>1</sup>

<sup>1</sup>Universidade Estadual do Rio de Janeiro, Rio de Janeiro, Brazil, <sup>2</sup>Universidade Federal Fluminense, Niterói, Brazil

**OBJECTIVES:** Treatment for breast cancer is usually based on chemotherapy and radiotherapy, but in unsuccessful cases, mastectomy is required. In Brazil, mastectomies are performed as simple or radical, with lymphadenectomy. This study aims to relate geographic distribution, temporal trends and economic profile of this procedure in Brazil. **METHODS:** Assessments about hospital admissions were performed to analyze costs and geographic distribution among mastectomies related with breast cancer realized in Brazil, from January 2008 to December 2012. The data used were extracted by Brazilian Hospital Information System (SIH/SUS) database, according to ICD-0416120032 (simple mastectomy) and ICD-0416120024 (radical with lymphadenectomy). Costs were estimated in 2014 Brazilian Real (BRL) and represents federal reimbursement values for hospitalizations (exams, drugs, medical procedures and fees). **RESULTS:** In Brazil, the number of mastectomies related with breast cancer ranged from 8,687 in 2008 to 9,703 in 2012. In Southeast region were performed 22,977 procedures, which was the largest number per region, compared with 1,814 in North; 8,443 in South; 2,280 in Midwest and 10,538 in Northwest. In São Paulo; 10,111 procedures occurred in this period, while 8 were performed in Amapá. Total costs with mastectomies due to breast cancer in Brazil during this period were 44,219,235.66 BRL. The value per patient increased about 12.5% over the years with mean costs from 2008 to 2012 of 799.75BRL, 842.62BRL, 845.28BRL, 878.20BRL and 870.25BRL, respectively. In 2010, the mean mortality rate among simple and radical mastectomies was 0.22% and increased until 0.54% in 2012. **CONCLUSIONS:** Geographic distribution of mastectomy due to breast cancer in Brazil is concentrated in Southeast region, in comparison to other regions and from 2008 to 2012 there was no change in this pattern. Although costs elevated, mortality also increased in this period.

#### PCN88

##### ESTIMATION OF ECONOMIC LOSSES RESULTING FROM DISEASES ASSOCIATED WITH SMOKING IN MEXICAN INSURED AND UNINSURED POPULATION

Mucio-Ortega E<sup>1</sup>, Hernandez-Reyes FC<sup>1</sup>, Reynales-Shigematsu L<sup>2</sup>

<sup>1</sup>Pfizer S.A. de C.V., Ciudad de México, Mexico, <sup>2</sup>Instituto Nacional de Salud Pública, Cuernavaca, Mexico

**OBJECTIVES:** Few data has been published in Mexico related to direct smoking costs from the consumer perspective. To estimate lost income and pocket costs related to smoking diseases from the perspective of Mexican families. **METHODS:** The analysis incorporated patients with public, private and no-health insurance from 18-65 years. Through Mexican literature review, medical costs and prevalence of 3 major diseases associated with tobacco consumption were identified: acute myocardial infarction (AMI), chronic obstructive pulmonary disease (COPD) and lung cancer (LC) as well as absenteeism associated to each disease. Average income was extracted from 2012 national income survey. Scenarios evaluated were: 1) Publicly

health-insured patients: from the 4th day of disability, the Instituto Mexicano del Seguro Social covers 60% of wages, 2) Private health-insured: economical loss of private beneficiaries is a 20% co-pay plus daily average income lost. 3) No-health-insurance: Medical costs and absenteeism represent the economical loss. Costs are expressed in 2014 USD (1USD=13MXN). Morbidity cases were extracted from published data by National Institute of Public Health and used to calculate a weighted average of economical losses for each scenario. **RESULTS:** The distribution of people with smoking-related disease (AMI, COPD and LC) was 25.0%, 65.4% and 9.6%, respectively. Patients in scenario 1) 2) and 3) spend/lose an average of \$446.6, \$8,448.2 and \$37,384.95 per year, respectively (medical costs are the drivers of the economic resources lost by not-insured population). Average illness expense derived from tobacco consumption regarding the proportion of people in each scenario was \$13,917 yearly (local per capita GDP is \$9,749). Regardless of health-insurance status, LC is the most expensive disease (\$39,564.26), followed by AMI and COPD (\$14,337.06 and \$10,109.32, respectively). **CONCLUSIONS:** The study showed that in the long run smokers incur significant economic losses even if they have medical insurance. Costs increases to people that do not have any insurance.

#### PCN89

##### COST COMPARISON AMONG FIRST LINE MONOCLONAL ANTIBODIES-BASED ONCOLOGY TREATMENT PROTOCOLS

Jakovljevic M<sup>1</sup>, Gutzwiller FS<sup>2</sup>, Schwenkgleks M<sup>2</sup>, Milovanovic O<sup>3</sup>, Rancic N<sup>4</sup>, Varjadic M<sup>3</sup>, Stojadinovic D<sup>5</sup>, Dagovic A<sup>6</sup>, Matter-Walstra K<sup>2</sup>

<sup>1</sup>The Faculty of Medical Sciences University of Kragujevac, Kragujevac, Serbia and Montenegro, <sup>2</sup>University of Basel, Basel, Switzerland, <sup>3</sup>Faculty of Medical Sciences, University of Kragujevac, Kragujevac, Serbia and Montenegro, <sup>4</sup>Military Medical Academy University of Defence Belgrade, Belgrade, Serbia and Montenegro, <sup>5</sup>Urology Clinic, University Clinical Center Kragujevac, Kragujevac, Serbia and Montenegro, <sup>6</sup>Oncology and Radiation Therapy Center, Clinical Center Kragujevac, Kragujevac, Serbia and Montenegro

**OBJECTIVES:** To assess and compare the costs of first-line monoclonal antibodies (mAbs) treatment protocols in breast cancer, non-Hodgkin lymphoma and colorectal carcinoma in South- eastern Europe. **METHODS:** A retrospective, bottom-up case series study design was implemented with one-year time horizon and payer's perspective. The study sample size was 265 patients (breast cancer, N=137, colorectal cancer, N=44, and non-Hodgkin lymphoma, N=84) while treatment protocols included adjuvant mAbs: trastuzumab (N=137), bevacizumab (N=28), cetuximab (N=16) and rituximab (N=84). ICD-10 related, direct medical and lost productivity costs (€) across treatment groups during 2010-2013. **RESULTS:** The average length of observation was 128±97 days per patient. Total mean direct and indirect costs of care were: trastuzumab breast cancer group €17,740; bevacizumab colorectal carcinoma group €8,775; cetuximab colorectal carcinoma group €27,181 and rituximab non-Hodgkin lymphoma group €19,431. An average mAbs-treated patient incurred €17,897 costs of medical care. The total combined budget of these 265 patients was €4,742,775. **CONCLUSIONS:** The use of mAbs strongly correlated with high costs in first-line cancer medical care and dominated other cost domains. Cetuximab-based treatment protocol in colorectal carcinoma patients was substantially more expensive compared to trastuzumab (C50); bevacizumab (C20) and rituximab (C80) alternatives. Extremely high costs of mAbs are the key-issue for Eastern European policy makers by crossing the upper limits of affordability in middle-income economies.

#### PCN90

##### USE PATTERNS AND COSTS OF ISOLATED LIMB PERFUSION AND INFUSION IN THE TREATMENT OF REGIONALLY METASTATIC MELANOMA: A RETROSPECTIVE DATABASE ANALYSIS

Ma Q, Zhao Z, Barber B, Shilkrut M

Amgen Inc, Thousand Oaks, CA, USA

**OBJECTIVES:** Isolated limb perfusion and infusion (ILP/ILI) are therapies for regionally metastatic melanoma where high doses of anticancer drugs are delivered directly into the circulation of an affected limb, while minimizing systemic drug exposure. This procedure can lead to high response rates but without proven benefits to overall survival. It is recommended by ESMO and NCCN guidelines as a treatment option for patients with stage III unresectable metastatic melanoma. However, limited information is available on its use pattern and costs in the literature. This study was to examine patterns of ILP/ILI use and associated costs in patients with melanoma in the US. **METHODS:** This is a retrospective, observational study using large administrative claims from the MarketScan® databases. Patients who underwent ILP/ILI (CPT-4: 36823) with diagnosis of melanoma (ICD-9-CM: 172. xx, V10.82) between 1/1/2002 and 3/31/2013 were included. Patient characteristics, use patterns, hospital length of stay, and costs (2013 US \$) of ILP/ILI were assessed. **RESULTS:** A total of 113 patients met the study criteria and were included in the analysis. The mean age was 62.1 years (standard deviation [SD] 14.1); 39.8% were male. The mean baseline Charlson's comorbidity index was 0.24 and 36.4% of patients were Medicare beneficiaries. Overall, 86.4% of patients had melanoma in the lower limb, 12.7% in the upper limb, and 0.9% in both upper and lower limbs; 59.3% had lymph node metastasis and 56.8% had skin metastasis. Four patients (3.5%) underwent multiple ILP/ILI procedures. The mean (±SD) hospital length of stay was 5.6 (± 3.5) days and the mean (±SD) cost was \$35,898 (± \$26,492) per ILP/ILI procedure. **CONCLUSIONS:** The use of isolated limb perfusion and infusion was associated with relatively long hospital stay and high cost. The results of this study may provide source data for economic evaluations of treatment options for regionally metastatic melanoma.

#### PCN91

##### A GUIDELINE-BASED ESTIMATE OF HEALTH CARE RESOURCE USE AND COST OF METASTATIC UNRESECTABLE OSTEOSARCOMA

Cornelio N<sup>1</sup>, Burudpakdee C<sup>2</sup>

<sup>1</sup>University of North Carolina at Charlotte, Charlotte, NC, USA, <sup>2</sup>MKTXS, Raritan, NJ, USA

**OBJECTIVES:** To estimate the resource use and costs a health plan can anticipate during the diagnosis, treatment, and surveillance of a patient with metastatic unre-