OBJECTIVES: Cancer patients undergo a wide range of laboratory procedures, from simple blood tests to complex molecular diagnostics. In cost-effectiveness analyses, costs of laboratory testing are often ignored or estimated inappropriately. We present real-world costs of laboratory procedures for non-small cell lung cancer (NSCLC) patients, per category of laboratory testing. **METHODS:** In a Dutch academic hospital, all laboratory tests performed for NSCLC patients between 2009 and 2011, were recorded and categorized in clinical chemistry; pathology; microbiology; serology, hematology, transfusion; pharmacology; and other or unknown. Number of tests per type were multiplied with unit costs per test obtained from The Dutch Healthcare Authority. **RESULTS:** 1,015 patients were included, with a total of 171,632 laboratory procedures. 392 different types of tests were performed. Mean cost for laboratory testing is EUR1,175 (95%CI 1,066-1,283) per patient. For cost allocation and modeling purposes, cost per month with laboratory testing (EUR265,95%CI 247-282) and cost per day with laboratory testing (EUR96, 95%CI 91-100) are presented. Costs are mainly driven by (molecular) pathology (26%), other (25%, mainly order processing fees) and clinical chemistry (24%, due to high test volumes). **CONCLUSIONS:** Costs of laboratory procedures for NSCLC patients are substantial. Relatively simple blood tests contribute significantly to these costs due to high test volumes. Main cost driver however is molecular testing by the pathologist, for the use of targeted therapies. In pharmacoeconomic evaluations, taking laboratory costs into account significantly impacts results, especially when testing practices differ between treatment alternatives.

PCN52

POSITRON EMISSION TOMOGRAPHY/COMPUTED TOMOGRAPHY IMAGING FOR NON-SMALL CELL LUNG CANCER: A BUDGET IMPACT ANALYSIS

Wichmann RM[1], Freitas MG[2], Silva MT[3]
[1]*Brazilian Ministry of Health, Brasilia, Brazil,* [2]*Brazilian Ministry of Health, Brasília, Brazil,* [3]*Universidade Federal de Manaus, Manaus, Brazil*

OBJECTIVES: To estimate the budgetary impact of the introduction of PET-CT for staging non-small-cell lung carcinoma (NSCLC) in Brazilian Public Healthcare System (SUS). **METHODS:** For estimation of the budgetary impact the work considered patients diagnosed with NSCLC that would be submitted to the PET-CT for tumor staging. It was considered the time horizon of 2013, 2014 and 2015. The number of procedures in those years was calculated from an estimate of the years 2008-2012, obtained from SUS. It was assumed that by 2013 the demand for PET grows due to its incorporation and, from then on, there would be a tendency to annual decrease of 7.5%, the same as in previous years. Cost estimates were obtained from recent cost-effectiveness literature. **RESULTS:** The average cost of the PET-CT procedure calculated in 2012 is $1,229.92, the value used for 2013 approximately. The 2014 and 2015 values were adjusted for inflation at rate of 5% per year, resulting $1,291.40 and $1,355.97, respectively. The total budget impact for each year was calculated by multiplying the number of procedures to be performed by its base value minus the savings achieved. The values of $2,072,300.84, $2,030,645.11 and $1,988,842.77, for the years 2013, 2014 and 2015, were found respectively. **CONCLUSIONS:** The introduction of PET-CT in the staging of NSCLC affects the budget of the Ministry of Health in 21.8%, 19.6% and 17.5% in the years 2013, 2014 and 2015, respectively.

PCN53

BUDGET IMPACT AND INCREMENTAL SURVIVAL BENEFIT OF ERIBULIN MESYLATE AS A TREATMENT FOR METASTATIC BREAST CANCER IN BRAZIL

Majethia U[1], Tremblay G[2], Borges L[3], Jones T[1], Forsythe A[2], Pomerantz D[4], Clark OAC[5]
[1]*Eisai, Woodcliff Lake, NJ, USA,* [2]*Eisai Inc, Woodcliff Lake, NJ, USA,* [3]*Evidências, Campinas, Brazil,* [4]*Kantar Health, Princeton, NJ, USA,* [5]*Evidencias, Campinas, Brazil*

OBJECTIVES: The objective of this study was to estimate the incremental Budget Impact (BI) and survival benefit of utilizing eribulin for treatment of Metastatic Breast Cancer (MBC) in patients with 2-5 prior chemotherapy regimens including anthracycline and taxane. **METHODS:** Epidemiology was derived from 2013 CancerMPact report and National databases (FOSP and INCA). Treatment of Physician's Choice (TPC) arm included capecitabine, gemcitabine, vinorelbine, docetaxel and paclitaxel. TPC market shares, efficacy and Adverse Events (AE) data were taken from Phase III clinical trial. Total costs comprised of drug costs, administration costs, direct medical and AE costs. A micro-costing analysis of resource utilization for AE treatments and disease management pre and post progressions was performed. Local Brazil tariffs for each costs unit were applied to an Excel-based model to compare total costs and survival rates with and without eribulin for MBC patients across a 5-year horizon from private payers perspective (assumed to cover 25% of Brazil population). **RESULTS:** Applying an MBC prevalence rate, proportion of patients with active disease and treated with 3rd line chemotherapies the model estimates up to 801 patients treated with eribulin out of 3864 eligible patients over 5 years. Assuming eribulin market share of 2%, 5%, 9%, 14% and 20% in years 1, 2, 3, 4 and 5, the BI is R$294K, R$741K, R$1345K, R$2111K and R$3043K (net increase of 0.12% - 1.21%). The main cost offsets include the displacement of more widely-used TPC therapies. Eribulin MBC treatment in Brazil is estimated to yield an incremental 245 progression free patient years and 408 life years in population covered by private insurance. **CONCLUSIONS:** Given the limited number of effective treatment options available to patients receiving third line chemotherapy, eribulin represents a much needed therapy option for this population. With additional survival benefits eribulin represents an effective innovative approach to MBC management.

PCN54

BUDGET IMPACT ON THE USE OF PEGFILGRASTIM TO REDUCE THE FEBRILE NEUTROPENIA DURING CHEMOTHERAPY FOR BREAST CANCER WITH MODERATE RISK COMPARED TO A STANDARD THERAPY

Choi WS, Lee YJ, Ju SY, Heo SB, Kim CM
Catholic University College of Medicine, Seoul, South Korea

OBJECTIVES: To conduct a budget impact analysis on the use of Pegteograstim (Neulageg®) to reduce the risk of febrile neutropenia (FN) during chemotherapies for breast cancer with moderate risk compared to a standard treatment with antibiotics and G-CSF after occurrence of FN. **METHODS:** The efficacy of pegylated recombinant human granulocyte colony stimulating factor (pegfilgrastim) to reduce the risk of FN, the incidence rate of FN was 39.5% in the control group, while it was 3.04% in the pegfilgrastim group. Pegteograstim (Neulageg®) was shown to be non-inferior compared to pegfilgrastimin the phase three clinical trial, so the result was directly applied. The number of patients to whom the result applies was estimated as 1,440 patients, which is 8% of the annual average number of breast cancer patients in South Korea. The hospitalization costs for FN was estimated by an average costs of 18 patients admitted to a Catholic University hospital in 2013, which was 15,396,014 (±18,847,475) KRW. Costs for isolated ward, 3rd generation antibiotics and G-CSF were included on the hospitalization costs for FN. Weighted average costs given by Health Insurance Review & Assessment Service were used for micro-costing. **RESULTS:** When assuming an average incidence rate of 20% for FN, FN will occur in 1.72% (25 patients), which is a 8.6% decrease with pegfilgrastim as well as with pegteograstim. Therefore, when estimating at the sum of the costs of pegfilgrastim, pegteograstim and the average cost of hospitalization, the total cost is 5,572,986,587 KRW for pegfilgrastim while it is 3,499,386,587 KRW for pegteograstim. On the other hand, when pegfilgrastim or pegteograstim are not used, the incidence rate of FN is 20% (288 patients), and the average cost of hospitalization after FN occurs is 4,434,052,032 KRW. **CONCLUSIONS:** When pegteograstim is reimbursed to reduce the incidence of FN during chemotherapies for breast cancer with moderate risk of FN, about 1 billion KRW saving is expected from a payer perspective.

PCN55

COSTS OF PNEUMONIA IN PATIENTS WITH CANCER DIAGNOSIS FROM THE PRIVATE HEALTH SYSTEM PERSPECTIVE IN BRAZIL

Manfrin DF[1], Ferreira CN[1], Santana CFSD[2], Paloni EDMP[2], Campi FDS[2], Gea Y[1], Rufino CS[1]
[1]*Pfizer, Inc., São Paulo, Brazil,* [2]*ORIZON - Companhia Brasileira de Gestão de Serviços, Sao Paulo, Brazil*

OBJECTIVES: Cancer patients are susceptible to infections, including pneumonia, due to immunosuppressive therapies associated with cancer treatment. This study aimed to evaluate the budget impact of pneumonia in patients with previous diagnosed cancer in the Brazilian Private Health System. **METHODS:** Orizon database (N=18 million lives) was used to identify patients with any type of cancer followed by a pneumonia hospitalization between October 2010 and December 2013. Pneumonia was identified using code of A40.3, B95.3, G00.1, J13, J15, J15.0, J15.3, J15.4, J15.8, J15.9, J18, J18.0, J18.9, J20.2, P23.3. Inpatient and related outpatient costs were included. **RESULTS:** A total of 68,717 patients with a pneumonia hospitalization were identified. Of those, 2,769 were diagnosed with cancer (WCa) before the pneumonia hospitalization for a total of 3,605 hospitalizations. This translated to a mean of 1.30 hospitalization per WCa patient. The group without cancer diagnosis (WoCa), 65,948 pneumonia patients had a total of 81,583 hospitalizations for a mean of 1.24 hospitalizations. The average costs per patient are BRL2,863.08 for the WoCa group and BRL9,288.07 for the WCa group. When considered the costs per hospitalizations the values are BRL2,314.60 and BRL7,134.16 respectively. **CONCLUSIONS:** Although the number of pneumonia hospitalization per patient was slightly higher in WCa compared with WoCA patients, the cost per patient and cost per hospitalization was at least 3 times higher in the WCa compared with WoCA patients. This suggests pneumonia has a substantial financial impact in patients with cancer who are in the Brazilian Private Health System.

PCN56

ECONOMIC IMPACT OF A GENOMIC COMPANION DIAGNOSTIC TEST FOR BREAST CANCER PATIENTS IN FRENCH PRIVATE HOSPITALS

Vataire AL[1], Aballéa S[1], Katz G[2]
[1]*Creativ-Ceutical, Paris, France,* [2]*ESSEC Business School, Paris-Singapore, Cergy, France*

OBJECTIVES: Several multigene prognostic and predictive tests have recently been launched. The 21-gene assay (OncotypeDX®), a validated gene expression profiling test that predicts the likelihood of adjuvant chemotherapy benefit in patients with early stage breast cancer, was found to be cost-effective and recommended in several guidelines. Its use in clinical practice in France is limited because of the absence of reimbursement. This study aims to determine if the utilisation of the 21-gene assay in private hospitals would provide good value for money from a collective perspective in France and whether hospitals can afford using the test under the current payment system. **METHODS:** A multicenter retrospective study was conducted to estimate the cost of adjuvant chemotherapy from societal and national insurance perspectives. The resulting estimate was used as an input of a Markov model to assess the cost-effectiveness of the 21-gene assay from the French collective perspective and the economic impact of the test on the revenue in private hospital organizations. **RESULTS:** The cost of adjuvant chemotherapy in private hospitals was estimated at €8,218 per patient from the national insurance perspective (€10,305 from the societal perspective). The 21-gene assay was found cost-effective compared to standard practice and cost-saving with inclusion of productivity costs. The absence of reimbursement involves a deficit for private hospitals of €3,200 per patient tested. **CONCLUSIONS:** Providing the 21-gene assay in French private hospitals would be cost-effective in the French collective perspective. In the absence of reimbursement from primary payers, some private hospitals may cover the costs of companion diagnostics to improve their attractiveness, but the test will be underused, thus depriving patients from a technology that could improve their quality of life and using resources that could be freed up for other patients.

PCN58

COST-EFFECTIVENESS AND BUDGET-IMPACT ANALYSIS OF BRAF INHIBITORS IN PATIENTS WITH METASTATIC MALIGNANT MELANOMA (MMM) IN SLOVENIA

Hren R
GlaxoSmithKline d.o.o., družba za promet s farmacevtskimi izdelki, Ljubljana, Slovenia

OBJECTIVES: To analyze cost-effectiveness and assses budget impact of novel BRAF inhibitors – vemurafenib and dabrafenib – in patients with MMM. **METHODS:** In the absence of head to head data we derived a decision model from indirect comparison