from peer reviewed literature. A multivariate sensitivity analysis using a Monte Carlo simulation was completed to ensure scientific rigour. **RESULTS:** VATS lobectomies are associated with higher procedural costs, but this is offset by a shorter length of stay and a lower postoperative complication rate. The model establishes that for a Canadian hospital performing 150 lobectomies increasing the proportion of VATS cases from 25% to 75% allows for a potential cost savings of CAD $226,066.01 annually. **CONCLUSIONS:** In a Canadian hospital, VATS lobectomy is a more cost-effective procedure than open lobectomy for early stage lung cancer.

PCN36

ESTIMATING THE ECONOMIC IMPACT OF RADIUM RA 223 DICHLORIDE (RADIUM-223) IN TREATMENT OF CASTRATION-RESISTANT PROSTATE CANCER (CRPC) WITH SYMPTOMATIC BONE METASTASES AND NO KNOWN VISCERAL METASTATIC DISEASE

Valderrama A[1], Bilir SP[2], Wehler EA[3], Seal BS[1], Wen L[1], Yaldo A[1], Munakata J[2]

[1]*Bayer HealthCare Pharmaceuticals Inc., Whippany, NJ, USA,* [2]*IMS Health, San Francisco, CA, USA,* [3]*IMS Health, Alexandria, VA, USA*

OBJECTIVES: Radium-223, an intravenously injected radioactive agent, is a new therapeutic option for CRPC patients with symptomatic bone metastases and no known visceral metastatic disease. This budget impact model (BIM) was developed from a United States (US) payer perspective to estimate the economic impact of adding radium-223 to current treatment options in this population. **METHODS:** An Excel-based BIM evaluated costs of treating CRPC with symptomatic bone metastases and no known visceral metastatic disease with available treatment options (chemotherapies, radionuclides, and oral antiandrogens) in a health plan with and without radium-223. One-year incremental costs were estimated for a hypothetical health plan with 1 million members. The prevalence of metastatic CRPC (mCRPC) patients was obtained from the national registry and published literature. Cost of therapy was obtained from Medicare average sales prices (ASP). Assumptions of outpatient administration and laboratory utilization were derived from product-specific package inserts with costs transformed into costs per 4 weeks based on indicated dosing. Associated costs were derived from the Centers for Medicare & Medicaid Services (CMS) Physician Fee Schedule. **RESULTS:** An estimated 220 patients were eligible for treatment with radium-223. Radium-223 was assumed to adopt 6.4% of the market in year 1 with equiproportional pull from available treatment options; a cost of $11,500 per 28-day cycle was assumed. In this base-case scenario, costs rose 1.7% ($208,755) or $0.02 per member per month (PMPM) compared to a health plan without radium-223. Sensitivity analyses, varying default inputs ± 10%, showed that results were robust, with greatest sensitivity to the number of radium-223 doses ($0.01–$0.03 PMPM). Other key variables such as cycles of treatment, number of patients treated, and market share resulted in no change to PMPM budget impact. **CONCLUSIONS:** Economic modeling indicates that adding radium-223 to a health plan's formulary minimally increases the PMPM cost by $0.02.

PCN37

BUDGET IMPACT OF THE 14-GENE RISK-SCORE (RS) ASSAY TO INFORM ADJUVANT CHEMOTHERAPY DECISIONS IN EARLY-STAGE NON-SMALL CELL LUNG CANCER (NSCLC)

Roth JA[1], Billings P[2], Ramsey S[3], Dumanois R[2], Carlson JJ[4]

[1]*Fred Hutchinson Cancer Research Center, Seattle, WA, USA,* [2]*Life Technologies, Inc, Carlsbad, CA, USA,* [3]*Fred Hutchinson Cancer Research Center and Professor, Department of Medicine, University of Washington, Seattle, WA, USA,* [4]*University of Washington, Seattle, WA, USA*

OBJECTIVES: Life Technologies has developed a 14-gene molecular assay (Pervenio™ Lung RS) that provides mortality risk stratification in resected early-stage non-squamous NSCLC. The test classifies patients as low, intermediate, or high-risk (for death), informing decisions about adjuvant chemotherapy use. Accordingly, high-risk patients may benefit from chemotherapy, and low-risk patients can avoid chemotherapy-associated morbidity and costs. Our objective was to estimate the budget impact of covering the assay in hypothetical commercial and Medicare health plans. **METHODS:** We developed a Markov model to estimate costs before and after coverage of the 14-gene RS in commercial (age <65) and Medicare (age 65+) health plans with 1 million enrollees. Health plan age distributions and disease incidence were derived from the U.S. census and SEER, respectively. Risk-group classification was based on 14-gene RS clinical studies, and chemotherapy uptake was based on a study of pre/post testing recommendations from 58 surgeons/oncologists. Included costs were those of the assay, chemotherapy with NCCN-recommended regimens, monitoring, post-recurrence care, and adverse events. We calculated the total and per-member per-month (PMPM) 1-year budget impact of adding coverage for the 14-gene RS, and evaluated uncertainty using one-way sensitivity analyses. **RESULTS:** The 1-year budget impact of covering the 14-gene RS assay in commercial and Medicare health plans with 1 million members is expected to be $24,200 (PMPM=$0.002) and $178,800 (PMPM=$0.015), respectively. The most influential parameters were the proportion of high-risk patients receiving chemotherapy, the chemotherapy recurrence hazard ratio, and the proportion of patients receiving initial surgical treatment. **CONCLUSIONS:** Our analysis suggests that covering the 14-gene RS assay is expected to increase chemotherapy use, decrease recurrences, and result in a small net increase in PMPM cost in commercial and Medicare health plans. These outcomes indicate that the assay has the potential to provide positive health outcomes for health plan members at a reasonable cost.

PCN38

ESTIMATING THE BUDGET IMPACT OF CRIZOTINIB FOR ALK-POSITIVE ADVANCED NON-SMALL CELL LUNG CANCER (NSCLC) IN ARGENTINA

Wang B[1], Furnback W[1], Xuan J[2]

[1]*Alliance Life Sciences, Somerset, NJ, USA,* [2]*Pfizer, Inc., New York, NY, USA*

OBJECTIVES: Non-small cell lung cancer (NSCLC) accounts for the majority of lung cancer cases and a high number of these patients have metastatic cancer at the time of diagnosis. The ALK mutation is only found in about 4% of NSCLC patients. The study aims to evaluate the budgetary impact of adding crizotinib for patients with ALK-positive, advanced NSCLC in Argentina. **METHODS:** A budget impact model we developed to evaluate two separate scenarios from a payer's perspective. The model compared scenarios with and without crizotinib. In the crizotinib scenario all patients testing positive for the ALK mutation were given crizotinib. Comparators were platin-containing regimens (ex pemetrexed), platin/pemetrexed, erlotinib/gefitinib, and crizotinib. Epidemiology, market basket, adverse event costs, and drug costs were informed through ten local physician questionnaires and published literature. The survey was administered to oncologists in six different private and public hospitals of varying sizes and locations in Argentina. Costs are in 2013 USD (1 USD = 5.88 ARS). **RESULTS:** Considering the population of Argentina (42,610,981) and applying age based incidence rates, the number of lung cancer patients was estimated to be 12,139. Of those patients 82.5% were estimated to be have metastatic NSCLC and 74% were likely to be treated, leaving 7,411 treated patients in the model. The estimated one-year cost for treating these patients without crizotinib was estimated to be $205,874,409. In the scenario including crizotinib, 154 patients (market uptake of 2.08%) were taken from other regimens and given crizotinib resulting in an estimated one-year cost of $224,651,145. The incremental total cost between these scenarios was $18,776,736 while the incremental costs per ALK+ patient and per member were $211 and $.04 respectively. These results were robust under standard parameter estimate variations. **CONCLUSIONS:** Adding crizotinib as a treatment option may have an acceptable budget impact under standard practices.

PCN39

BUDGETARY IMPACT OF ORAL CHEMOTHERAPY IN BRAZIL: A REAL WORLD DATA ANALYSIS FROM THE PRIVATE PAYERS' PERSPECTIVE

Clark OAC, Castro AP, Alves AF, Goes L, Borges L

Evidências, Campinas, Brazil

OBJECTIVES: In Brazil, health insurance companies (HIC) must, according to the law, offer coverage for intravenous (IVChem) antineoplastic drugs. The obligation to pay for oral drugs (OChem) was effective only after January 2014. Our goal was to evaluate the incremental costs and budgetary impact of the incorporation of OChem, using real world data, from the private payers' perspective. **METHODS:** During one year (Jun 2012-mai 2013) we prospectively collected data on chemotherapy usage in 25 HIC, with a population of 3 million people from different regions in Brazil. First we calculated the costs of IVChem actually used. After that, we identified which patients would have formal indication for OChem either as a substitutive treatment or in association with IVChem. Then, we calculated the costs associated with this intervention. Later, the budgetary impact of using OChem for the eligible patients was calculated. Only drug acquisition costs were taken into account. We analyzed two scenarios: one with a total substitution of IVChem for OChem, when OChen treatment was less expensive than IVChem and another, using a "worst case scenario" approach, were OChem was used only in cases where it added costs. **RESULTS:** During the one-year period, 2,104 patients that received intravenous chemotherapy also had formal indication to receive OChem. If OChem had been used, in a rational protocol-based manner, there would have been an economy of R$ 0,10 (US$ 0,42) per HIC user per month. In the worst-case scenario, the incremental cost would be an additional R$ 0,39 (US$ 0,16) per HIC user per month. **CONCLUSIONS:** The budgetary impact secondary to OChem adoption may vary from decreasing costs to increasing them; depending on how they are used and to which patient they are prescribed. HIC should pay close attention to the profile of use of OChem in order to avoid unnecessary costs.

PCN40

BUDGET IMPACT OF ALBUMIN-BOUND PACLITAXEL + GEMCITABINE IN THE TREATMENT OF METASTATIC PANCREATIC CANCER

Binder G[1], Whiting S[1], Milentijevic D[2], Penenberg D[3], Wei X[3], Kayitalire L[1], Renschler MF[1]

[1]*Celgene Corporation, Summit, NJ, USA,* [2]*Market Access Solutions, Raritan, NJ, USA,* [3]*Celgene Corporation, Berkeley Heights, NJ, USA*

OBJECTIVES: In a Phase III clinical trial (Von Hoff, *NEJM* 2013) albumin-bound paclitaxel (*nab*-P) plus gemcitabine (*nab*-P/G) significantly improved median overall survival (OS) in first-line metastatic pancreatic cancer (1LmPanc) patients vs. gemcitabine (G) alone (8.7 vs. 6.6 months, hazard ratio 0.72, P<0.001). The objective of this analysis is to estimate the budget impact of adding *nab*-P/G for 1LmPanc treatment at a US health plan. **METHODS:** A budget impact model was built to estimate 1LmPanc costs for *nab*-P/G, G, Erlotinib + Gemcitabine (EG), Other G combinations (OG), and FOLFIRINOX (F), from a US health plan perspective in 2013 US dollars. Inputs for drug, administration, G-CSF, and adverse events were derived from prescribing information, publications, Medicare reimbursement rates, and other public sources. Sensitivity analysis assessed utilization mixes and elderly populations. **RESULTS:** A 1,000,000-member health plan mirroring the US population age mix would have 70 patients with 1LmPanc annually. The model assumed equal proportions of G, EG, OG, and F (25% of patients each) at baseline, and equal use (20% each) after *nab*-P/G 1LmPanc approval. Total course of therapy costs were G $2,634, EG $22,555, OG $10,840, F $39,437. Baseline total mPanc costs were $1.3 million, or $0.11 per member per month (PMPM). Adding *nab*-P/G at $29,096 per course of therapy added $142,610, or $0.01 PMPM, to the baseline. In a sensitivity analysis with 50% of patients using *nab*-P/G, incremental cost was $0.03 PMPM. For a health plan population age 65-79, baseline cost of $0.48 PMPM rose $0.05 PMPM from *nab*-P/G. If only 70% of 1LmPanc patients received drug therapy, costs from *nab*-P/G rose $0.01 from $0.08 PMPM at baseline. **CONCLUSIONS:** The budget impact of adding albumin-bound paclitaxel plus gemcitabine for a US health plan's first-line metastatic pancreatic cancer patients was estimated at $0.01 PMPM; the impact was consistent across several sensitivity analyses.

PCN41

BURDEN OF DISEASE ATTRIBUTABLE TO SMOKING IN COLOMBIA

Peña-Torres E[1], Osorio-Cuevas DI[1], Gamboa-Garay O[2], Pichón-Riviere A[3], Bardach A[4], Alcaraz A[5], Caporale J[5], Augustovski F[5]

[1]*Instituto de Evaluación Tecnológica en Salud, Bogotá, Colombia,* [2]*Instituto Nacional de Cancerología, Bogotá, Colombia,* [3]*Instituto de Efectividad Clínica y Sanitaria, Buenos Aires,*