outputs include total costs (Singapore dollars (SGD); 1 SGD=0.82 USD), IFIs avoided, life-years saved, and incremental cost-effectiveness of posaconazole versus fluorouracil/ irinotecan. A probabilistic sensitivity analysis (PSA) was considered, where probabilities of IFI, IFI-related death, and 100-day other cause mortality were assigned beta distributions from trial data. RESULTS: Total costs of prophylaxis with fluorouracil/ irinotecan and posaconazole were SGD 4,475 and SGD 4,433, respectively. Corresponding 95% confidence intervals were 2.90 - 5.10 IFIs and 2.44 and 2.51 life-years. Incremental cost-effectiveness ratios for posaconazole were SGD 8,150 per IFI avoided and SGD 7,526 per life-year saved. Posaconazole was cost-effective compared to fluorouracil/ irinotecan in 94% of PSA trials. A base case threshold of SGD 80,000 (USD 53,579) was used in Singapore. CONCLUSIONS: Use of posaconazole in place of fluorouracil/ irinotecan for prevention of IFIs in a high-risk neutropenic population is cost-effective at a willingness-to-pay threshold of SGD 80,000 per life-year saved in Singapore.

PCN63 ASSOCIATION BETWEEN OVERALL INCREMENTAL COST AND SURVIVAL BENEFIT OF SECOND LINE CHEMOTHERAPY/BIOLOGICS TREATMENT AMONG ELDERLY Melanoma patients and robust sensitivity analyses; it is likely that patients with metastatic colorectal cancer (mCRC) is based on body surface area (BSA), which has been shown to yield suboptimal TPS 5-FU levels. Pharmacokinetic (PK) modeling of 5-FU shows promise in terms of optimal dose setting, but its cost-effectiveness is unknown. This study performs a cost-effectiveness analysis of PK dosing versus BSA dosing of 5-FU among patients with mCRC in the UK. METHODS: A decision tree model was used to perform a comprehensive comparison of the cost-effectiveness of PK versus BSA dosing of 5-FU in standard chemotherapy regimens for mCRC in the UK population. All patients were assumed to receive first-line therapy for 6 or 12 cycles until progression. After which the patient was restricted to optimal supportive therapy and subsequent palliative care until death. Costs were estimated from the perspective of the national health system as payer, were drawn from the literature and publically available national cost estimates. Effectiveness was quality adjusted life years (QALY), with utilities estimated from the literature. Discounting was performed at 3% per year. Incremental cost-effectiveness ratios comparing PK to BSA dosing were computed for the six most common chemotherapy regimens that utilize 5-FU. RESULTS: The average ICER across all regimens and weighted by their current distribution was £7,336 per incremental QALY gained. The ICER for lifetime discounted incremental cost per incremental QALY for PK versus BSA dosing was £3,467 for a FC0x4 regimen, £3,594 for a FC0x6 regimen, £3,248 for FO8, £3,508 for FOx6, $21,874 for FOLFIRI + bevacizumab, and $28,862 for a 5-FU + leucovorin chemotherapy regimen. CONCLUSIONS: PK dose management of 5-FU based chemotherapy regimens for patients with mCRC in the UK is not a cost-effective strategy from a UK national payer perspective. Cost-effectiveness was driven in part by better efficacy and reduced adverse events.

PCN66 COST-EFFECTIVENESS AND COST-UTILITY ANALYSIS OF SUNITINIB VERSUS SORAFENIB AND BEVACIZUMAB + INTERFERON-ALFA AS FIRST-LINE TREATMENT FOR METASTATIC RENAL CELL CARCINOMA IN MEXICO RESULTS: We calculated the incremental costs and effectiveness of sunitinib versus sorafenib and bevacizumab plus interferon-alfa using a Markov model and compared these differences in a cost-utility analysis. All costs were expressed in Mexican pesos. CONCLUSIONS: Despite lower costs, sunitinib appears more effective and more cost-effective than sorafenib or bevacizumab plus interferon-alfa, offering a better balance for willingness to pay.

PCN64 COST-EFFECTIVENESS OF IPILOMUB IN PREVIOUSLY TREATED PATIENTS FOR ADVANCED MELANOMA IN PORTUGAL RESULTS: The estimated survival benefit of receiving second line chemotherapy/biologics treatment ranges from 6 to 9 months. This improved survival was associated with costs that are slightly above €53,579/LY. Results were most sensitive to different survival extrapolation models and other local institutions were considered. Both costs and effectiveness were utilised from a societal perspective. CONCLUSIONS: Incremental cost-effectiveness ratios for 3.51 and 3.79 life-years. Incremental cost-effectiveness ratios for 1.440 (44%) received Tx2; 274(8%) received subsequent treatments. The analysis was restricted to patients who received any chemotherapy/biologics treatment. Cox regression and partitioned least squares regression were utilized to obtain the incremental survival benefit and the overall incremental cost associated with the receipt of Tx2 within a five-year period, respectively. The regressions controlled for patient demographic and clinical characteristics including cancer related measures, Charlson comorbidity index and proxy for poor performance status. Bootstrapping was used to produce 95% confidence intervals (CI). RESULTS: Of the 3,266 elderly Medicare mCRC who received Tx1, 2,744 (84%) died within the observation period, 1,440 (44%) received Tx2; 274(8%) received subsequent treatments. The incremental survival benefit associated with the receipt of Tx2 was 0.631 years (CI: 0.517 – 0.761), and the associated overall incremental cost was €107,027 (CI: 93,401 – 120,887). The incremental cost-effectiveness ratio for Tx2 was €169,722 per life year gained (CI: 137,139 – 208,134). CONCLUSIONS: The estimated survival benefit of receiving second line chemotherapy/biologics treatment ranges from 6 to 9 months, which is consistent with evidence from clinical trials. This improved survival was associated with costs that are slightly above €100,000.

PCN62 CONCLUSIONS: Use of posaconazole in place of fluorouracil/ irinotecan for prevention of IFIs in a high-risk neutropenic population is cost-effective at a willingness-to-pay threshold of SGD 80,000 per life-year saved in Singapore.

PCN65 COST-EFFECTIVENESS OF PHARMACOKINETIC DOSING OF 5-FLUOROURACIL IN METASTATIC COLORECTAL CANCER IN THE UNITED KINGDOM OUTPUTS included total costs (Singapore dollars (SGD); 1 SGD=0.82 USD), IFIs avoided, life-years saved, and incremental cost-effectiveness of posaconazole versus fluorouracil/ irinotecan. A probabilistic sensitivity analysis (PSA) was conducted, where probabilities of IFI, IFI-related death, and 100-day other cause mortality were assigned beta distributions from trial data. RESULTS: Total costs of prophylaxis with fluorouracil/ irinotecan and posaconazole were SGD 4,475 and SGD 4,433, respectively. Corresponding 95% confidence intervals were 2.90 - 5.10 IFIs and 2.44 and 2.51 life-years. Incremental cost-effectiveness ratios for posaconazole were SGD 8,150 per IFI avoided and SGD 7,526 per life-year saved. Posaconazole was cost-effective compared to fluorouracil/ irinotecan in 94% of PSA trials. A base case threshold of SGD 80,000 (USD 53,579) was used in Singapore. CONCLUSIONS: Use of posaconazole in place of fluorouracil/ irinotecan for prevention of IFIs in a high-risk neutropenic population is cost-effective at a willingness-to-pay threshold of SGD 80,000 per life-year saved in Singapore.
the clinical trial and assumed equal in the models. Costs and outcomes beyond first year were discounted at a 5% annual rate. RESULTS: Denosumab was associated with lower frequency of SRE due to clinical superiority versus ZA, and with higher costs. The incremental cost per SRE avoided was estimated at $78,844. Although a formal threshold for this outcome is not available in Mexico, the ICER obtained is 40% below the commonly accepted threshold in Mexico (based on the GDP per capita). The ICER remained below the local accepted threshold in all univariate sensitivity analyses. In the probabilistic sensitivity analysis, denosumab became the most preferred option from a willingness-to-pay perspective to pay $10,000,000 per QALY for preventing a SRE in 1,000 Mexican women. CONCLUSIONS: These results suggest denosumab represents good value for money in the prevention of SRE in breast cancer patients with BM in Mexico.

PCN68
FDG-PET/CT FOR STAGING NON-SMALL CELL LUNG CANCER – A COST-EFFECTIVENESS ANALYSIS TO PREDICT UNNECESSARY SURGERIES IN BRAZILIAN HEALTHCARE PERSPECTIVE
Schuckecker L1, 2, Castano R1, 2, Weisberg R1, 2, Padilha AC1, 2, Ribeiro C1, 2, de Melo Júnior D1, 2
1Brazilian National Cancer Institute (INCA), Rio de Janeiro, Brazil, 2Rio de Janeiro State University, Rio de Janeiro, Brazil, 3Institute for Clinical Effectiveness and Health Policy (IECS), Buenos Aires, Argentina
OBJECTIVES: To evaluate the most cost-effective strategy of staging non-small cell lung cancer with hybrid PET/CT to avoid unnecessary surgeries. METHODS: A decision tree model was developed with four work-up approaches: CT alone, PET/CT for all, CT plus PET/CT when negative CT, and CT plus PET/CT for all. Mediastinoscopy was included in all alternatives to confirm positive CT or PET/CT for all, PET/CT when negative CT, and CT plus PET/CT for all. Sensitivity analyses were performed with different threshold costs for avoiding surgery as follow: US$1.088.248,85/ 0; US$2.620.087,94/ 151; US$2.432.104,45/ 170 and US$2.740.718,99/ 181, respectively. The incremental cost-effectiveness ratio (ICER) per avoidable surgery was more favorable for PET/CT in negative CT (US$2.620.087/88/ surgery) than PET/CT for all (US$10.127/ surgery) and CT plus PET/CT versus CT alone. In sensitivity analysis, estimates of ICER were sensitive to changes in the probability of distant metastasis, the cost of PET/CT procedure and probability of N0/1 disease. CONCLUSIONS: Although PET/CT is recommended for staging potential resectable lung cancer patients, the procedure is not reimbursed in Brazilian public health care system yet. Our study shows that include PET/CT in the work-up staging of lung cancer could prevent misleading surgeries due to undiagnosed advanced disease. In term of cost-effectiveness, PET/CT in negative CT patients is the most cost-effective strategy with a probability higher than 95% when the willingness-to-pay is US$10,000.00.

PCN69
COST-EFFECTIVENESS ANALYSIS OF THE USE OF ONCOTYPE DX TO GUIDE ADJUVANT CHEMOTHERAPY DECISIONS IN BREAST CANCER PATIENTS IN MEXICO
Flun-Farvaez J1, 2, Guzman C1, Chavinda V1, Pozo L1
1Genomic Health, Redwood City, CA, USA, 2Farmacias Especializadas, Mexico City, Mexico
OBJECTIVES: To evaluate the cost-effectiveness of using Oncotype DX™ to inform adjuvant chemotherapy treatment decisions versus standard clinical practice (use of traditional clinical and pathological criteria). OncoType DX is a 21-gene assay that provides an individualized prediction of chemotherapy benefit and 10-year distant recurrence for patients with hormone receptor positive, human epidermal growth receptor 2 negative (HER2–), early-stage breast cancer. METHODS: A Markov model was developed to make long-term projections of distant recurrence, survival, and direct costs for patients described above. Scenarios using Oncotype DX to inform treatment recommendations for adjuvant chemotherapy or chemotherapy procedures were modeled based on published decision impact studies. Transition probabilities and risk adjustment were based on published landmark trials. Costs are reported in U.S. dollars at an exchange rate of 15.17 MXN per dollar (average 2012) and were estimated from an Instituto Mexicano del Seguro Social (IMSS) perspective based on published data. Future costs and clinical benefits were discounted at 5% annually. Sensitivity analyses were performed. RESULTS: 25.5% of early-stage breast cancer patients were predicted to receive chemotherapy following testing, while 74.5% of patients received chemotherapy in addition to hormone therapy. Long-term modeling analysis showed that optimized therapy allocation following Oncotype DX testing led to an improvement in mean life-expectancy of 0.068 years per patient and increased direct costs by $129.6 per patient versus usual care. This equated to an incremental cost-effectiveness ratio (ICER) of $1,917 per life-year gained. In a secondary analysis of patients previously recommended chemotherapy, Oncotype DX was associated with avoidance of chemotherapy in 46% of patients, leading to cost savings of $2,082 per patient, with life expectancy maintained at the level expected with standard care. CONCLUSIONS: Oncotype DX is cost-effective in comparison with the current standard of care.

PCN70
COST-EFFECTIVENESS OF PROPHYLAXIS TREATMENT STRATEGIES FOR FEBRILE NEUTROPENIA IN RECURRENT OVARIAN CANCER PATIENTS
Post K1, Li X1, Maschio M1, Barron R2, Weinstein MC3, Parthan A1, Walli-Attaei M3, Chander DP, Lyman GH4
1Surgical Oncology, Cambridgeshire and Peterborough NHS Foundation Trust, Cambridge, Cambridgeshire, UK, 2Aamgen, Inc., Thousand Oaks, CA, USA, 3OptumInsight, Burlington, ON, Canada, 4Harvard School of Public Health, Boston, MA, USA, 5Duke University, and the Duke Cancer Institute, Durham, NC, USA
OBJECTIVES: To evaluate the cost-effectiveness of primary and secondary prophylaxis (PP and SP) with pegfilgrastim versus no prophylaxis for decreasing the incidence of febrile neutropenia (FN) in recurrent ovarian cancer patients receiving 3 cycles of myelosuppressive chemotherapy (PP) every 21 days versus 1 cycle (SP) every 28 days from a U.S. payer perspective. METHODS: A Markov cycle tree model tracks FN events in chemotherapy cycles 1-3 (3-week cycles) and long-term survival (1-year cycles). Long-term survival is modeled according to received relative dose intensity (RDI), which are modeled with FN history and include efficacy and risk of FN (compared to no prophylaxis) of each strategy, effects of FN on RDI, mortality, costs, and utilities, were estimated from public sources, research databases, and peer-reviewed publications. Future costs and clinical benefits were discounted at 3%. Years of life (QALYs) were compared with those from the hospital data on survival was reviewed for 2 years from the hospital data and published literature. Direct & indirect costs included were physician and nursing cost, drug cost, diagnostic and lab costs, loss of wages and cost of travel. Primary outcomes were month of life gained and adverse events. A one way sensitivity analyses were conducted by varying the cost and survival by 25%. Hospital data on survival was reviewed for 2 years from the initiation of treatment. RESULTS: The cost-effectiveness analysis showed that prophylaxis was the cost-effective alternative to goserelin (US$2668 vs. $7156 per patient). The incremental cost-effectiveness ratio (ICER) of prophylaxis compared to goserelin was $286 per month of life gained. Results were sensitive to variations in costs and month of life gained by 25% proving leuprolide being a cost-effective option versus goserelin. Leuprolide was found being less expensive both to the patient as well as to the payer. CONCLUSIONS: Leuprolide appears to be the least costly approach for the treatment of metastatic prostate cancer in the Bahamas, from a societal perspective. Further investigations are needed to confirm its cost effectiveness considering other cost variables & quality of life.

PCN71
ECONOMIC EVALUATION OF BREAST CANCER PREVENTION AGENTS: COMPARING TAMOXIFEN, RALOXIFENE AND EXEMESTANE
Sakr K1, 2, Parthan A1, 3, 4, 5, Fust K1, 2, Li X1, 5, Maschio M1, 2, Barron R3, 4, 5, 6, Weinstein MC3, 4, 5, 7, 8, 9, 10, 11, 12, 13, Parthan A1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, Walli-Attaei M3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 20
1Center for Value & Outcomes Research, OptumInsight, Cambridge, MA, USA, 2Department of Marketing and Science, OptumInsight, Cambridge, MA, USA, 3Duke University, and the Duke Cancer Institute, Durham, NC, USA
OBJECTIVES: Breast cancer is a major public health problem in the Bahamas particularly among blacks and identified as one of the major contributors to mortality. Luteinizing hormone releasing hormone (LHRH) agonist, goserelin and leuprolide are the only two drugs that are available on the Bahamas national drug formulary. The objective of this study was to conduct a cost effectiveness analysis of goserelin acetate 10.8 mg depot versus leuprolide acetate 7.5 mg depot in the treatment of metastatic prostate cancer in the Bahamas, from a societal perspective. METHODS: Cost and probabilities of outcomes were derived from the hospital data and published literature. Direct & indirect costs included were physician and nursing cost, drug cost, diagnostic and lab costs, loss of wages and cost of travel. Primary outcomes were month of life gained and adverse events. A one way sensitivity analyses were conducted by varying the cost and survival by 25%. Hospital data on survival was reviewed for 2 years from the initiation of treatment. RESULTS: The cost-effectiveness analysis showed that prophylaxis was the cost-effective alternative to goserelin (US$2668 vs. $7156 per patient). The incremental cost-effectiveness ratio (ICER) of prophylaxis compared to goserelin was $286 per month of life gained. Results were sensitive to variations in costs and month of life gained by 25% proving leuprolide being a cost-effective option versus goserelin. Leuprolide was found being less expensive both to the patient as well as to the payer. CONCLUSIONS: Leuprolide appears to be the least costly approach for the treatment of metastatic prostate cancer in the Bahamas, from a societal perspective. Further investigations are needed to confirm its cost effectiveness considering other cost variables & quality of life.

PCN72
VALUE IN HEALTH 16 (2013) A1-A298