medical records including disease characteristics, treatment regimens, medications used and treatment outcomes. The study was conducted from the perspective of a Macao public hospital. The European Organization for Research and Treatment of Cancer quality-of-life questionnaire (EORTC QLQ-C30 version 3.0, Chinese-Hong Kong version) was used for HRQL assessment. RESULTS: The standard dose-cost-based and vincristine-doxorubicin-dexamethasone-based regimens (VAD) were the most common treatment regimens. There were 24 and 10 patients in the melphalan-based and VAD-based group respectively. Six patients were not studied due to incomplete data in the melphalan-based group at a more advanced age (70.4 ± 7.4 years; p < 0.001). The melphalan-based group showed a lower overall treatment cost (MOP 29,231 versus MOP 44,831; p = 0.521, 1 USD = 8 MOP), especially on inpatient medication cost (MOP 5,809 versus MOP 13,908; p = 0.096). The VAD-based group scored better clinical outcomes than the melphalan-based group in terms of overall survival, progression-free survival and survival probability with time. The incremental cost-effectiveness ratio of VAD-based regimens compared with melphalan-based regimen was MOP 6,695 per life-year-gained. CONCLUSIONS: The results of the study show that VAD-based regimens are very cost-effective according to the WHO recommended thresholds for cost-effectiveness in patients with MM in Macao.

OPEN Versus laparoscopic procedures for colectomy surgery for patients with colon rectal cancer: a cost effectiveness analysis, under the Brazilian private payer perspective

Nascimento Vaggis MG

Johnson & Johnson, Sao Paulo-SP, Brazil

OBJECTIVES: To examine the cost-utility of using KRAS mutation testing prior to initiating cetuximab monotherapy for patients with metastatic colorectal cancer (mCRC) from a US payer perspective. METHODS: A decision analytic model was developed to evaluate the clinical and economic impact of three strategies for treating mCRC, 1) cetuximab monotherapy; 2) best supportive care (BSC); and 3) KRAS mutation testing with cetuximab for KRAS wild type patients and BSC for patients harboring a KRAS mutation. Model parameters were derived from the Co.17 trial, published literature, and government sources. The model included trial-based survival estimates and adverse event rates as well as costs related to drug treatment and administration. Results: Total costs were $44,301; $6,364; and $34,263, respectively. Total QALYs for the cetuximab, BSC, and KRAS testing strategies were 0.47, 0.36, and 0.47, respectively. Total costs were $44,301; $6,364; and $34,263, respectively. Relative to BSC, cetuximab for all and KRAS testing strategies had incremental cost-effectiveness ratios of $357,224 and $264,644 per QALY, respectively. Relative to cetuximab for all, the KRAS testing strategy saved $10,037 with a negligible decrease in QALYs. One-way sensitivity analyses found the results to be most sensitive to the survival estimates, KRAS testing, adverse events, and pre-progression utility score. In the probabilistic sensitivity analysis, BSC had the highest probability of being cost-effective until a willingness-to-pay of $275,000, after which KRAS testing had the highest probability. CONCLUSIONS: These results suggest that the use of KRAS testing to select patients for cetuximab treatment in mCRC can reduce costs with minimal impact on QALYs as compared to using cetuximab for all patients. However, the cost-effectiveness of KRAS testing vs. best supportive care remains well above commonly used cost-effectiveness thresholds.

Economic evaluation on the use of plerixafor alongside the granulocyte-colony stimulating factor (G-CSF) in preparation for an autologous hematopoietic stem cell transplantation on patients with non Hodgkin’s lymphoma

Salinas G1, Idrojo J1, Espino L2

Hospital Internacional de México Federico Gómez, México, DF, México, National Institute of Public Health, Cuauhnahuac, Montes de, Mexico, Guas Marg, Mexico, DF, Mexico

OBJECTIVES: To estimate the average and incremental cost effectiveness ratios for the plerixafor+G-CSF treatment, compared to just a G-CSF, in preparation for an autologous hematopoietic stem cell transplantation on patients with Non Hodgkin’s Lymphoma for all the institutional perspective in the Mexican context. METHODS: Cost-effectiveness analysis by using a decision tree, to compare the costs and results of using a Granulocyte-Colony Stimulating Factor vs. G-CSF and plerixafor, from the institutional perspective. A 2 year temporal horizon was considered. The effectiveness measurement used, took into consideration the percentage of patients that survive the transplantation or graft and was obtained from published medicine based clinical studies. Only direct medical costs taken from the mexican health system were evaluated. RESULTS: Estimated QALY difference between lenograstim and filgrastim is 0.0014 (CI95%[0.0008; 0.0020]). Total costs difference between lenograstim and filgrastim is $533 PLN (CI95%−[1,052; −28]). Probability of lenograstim being cost-effective over filgrastim is 99.16%. Taking into account only trials where G-CSFs were used in neutropenia prophylaxis estimated QALY difference between lenograstim and filgrastim is 0.0014 (CI95%[0.0008; 0.0020]). Total costs difference between lenograstim and filgrastim is $699 PLN (CI95%−[1,376; −32]). Probability of lenograstim being cost-effective over filgrastim is 98.98%. CONCLUSIONS: Lenograstim is dominant over filgrastim. Acknowledgements: This analysis was supported by Sanofi-Aventis.
years, was 95.1% in the case of GCSF-plerixafor therapy compared to 42.6% for GCSF. Additionally, the average reported cost for GCSF-plerixafor treatment in successful cases was $35,020, and in the case of a GCSF treatment the cost totaled US$93,323, which represents a 62% saving for an actual year of therapy. Therefore, the GCSF-plerixafor model, the results are comparatively more cost-effective and hence more attractive to both patients and providers as the most viable alternative. CONCLUSIONS: The GCSF-plerixafor treatment is a cost effective alternative, from a Mexican institutional perspective for Non Hodgkin’s Lymphoma patients in preparation for an autologous hematopoetic stem cell transplantation.

Abstracts

PCN71

COST EFFECTIVENESS ANALYSIS OF BREAST CANCER RISK REDUCTION THERAPY: COMPARING TAMOXIFEN AND RALOXIFENE

Poon JL, Hay J
University of Southern California, Los Angeles, CA, USA

OBJECTIVES: To illustrate the relative value of raloxifene compared to tamoxifen, in the chemoprevention of invasive breast cancer in postmenopausal women in the United States. METHODS: Using outcomes data from the NSABP P-2 trial, a backward induction model was performed from the societal perspective, comparing tamoxifen and raloxifene in postmenopausal women aged 55 to 70 years, with base case 5-year breast cancer risk of 4.03%. Secondary outcomes considered were thromboembolic events, cataracts, uterine hyperplasia and hysterectomy. Quality adjusted life years (QALY) gained from using raloxifene versus tamoxifen was estimated by considering the quality adjusted life expectancies for all model outcomes for each drug. Costs were in 2009 US dollars and costs and outcomes were discounted at an annual rate of 3%. An incremental cost effectiveness ratio (ICER) decision threshold of US$100,000/QALY gained was used to determine age-cohort specific cost-effectiveness. One-way sensitivity analyses were performed on outcome parameters and the discount rate, and threshold analyses were performed on parameters the model was sensitive to. Raloxifene was found to be cost effective relative to tamoxifen for all age-cohorts in the model, with ICERs between US$25,631 and US$103,316/QALY gained at age 60 and 35 respectively. The model was most sensitive to raloxifene cost, the ICER varying by 91.8% when the cost varied by 10%. The model was also sensitive to the probability of developing cataracts and requires a hysterectomy when on tamoxifen therapy. For raloxifene to not be cost effective raloxifene costs would have to increase 5.7 times or the probability of developing cataracts or requiring hysterectomy when on tamoxifen therapy would have to reduce to zero and by 50% respectively. CONCLUSIONS: Raloxifene was found to be more effective, less costly, and finally the ICERs were the incremental cost per additional women screened. Uncertainty was examined with sensitivity analyses. RESULTS: The total cost per participant, was $216 for video, $219 for flip chart, and $223 in the full intervention. The proportion of women reporting a Pap test was 0.261 in the control arm, 0.484 in the video arm, 0.515 in the flipchart arm and 0.568 in the full intervention arm. The ICERs were $9686 comparing the control arm to the video, $94 comparing the video to flip chart arm and $72 comparing flip chart to the full intervention arm. CONCLUSIONS: The promotoría led interventions had important and statistically significant effects on screening behavior and compare favorably with the other two strategies designed to promote cervical cancer screening in the study. The study provides economic information for health educators in designing and budgeting promotora based cancer screening promotion programs for low income Hispanic women.

PCN72

ECONOMIC EVALUATION OF SUNITINIB VS. INTERFERON-Α IN THE TREATMENT OF METASTATIC RENAL CELL CARCINOMA (CCRM) – BRAZILIAN PRIVATE HEALTH SYSTEM PERSPECTIVE

Teich V1, Hashimoto CM2, Marinho T1, Charbonneau C1, Naves A1
1Medinside, Rio de Janeiro, RJ, Brazil, 2Pfizer Brazil, Sao Paulo, SP, Brazil, 3Pfizer, Inc, New York, NY, USA

OBJECTIVES: To illustrate the relative value of sunitinib compared to interferon-α, in the treatment of metastatic renal cell carcinoma, in Brazilian Private Health System perspective. METHODS: A Markov model, with 6 cycles and a 2 year time horizon was developed in Microsoft Excel to evaluate the cost-effectiveness of sunitinib vs. IFN-α horizon. A hypothetical cohort of 1,000 patients was used for each arm. The clinical outcomes of interest were overall survival, freedom from progression at 6 months and 1 year, and QALYs, and the cost-effectiveness ratio (ICER) was derived. Costs and quality of life data were collected from published sources and from several Brazilian private health plans. RESULTS: Our model estimated that sunitinib increases LY and PFLY by 0.08 and 0.81 respectively, QALYs gained, treatment costs, and incremental cost-effectiveness ratios (ICER). The model used a 1% discount rate. CONCLUSIONS: Sunitinib vs. IFN+α, sunitinib achieved overall cost saving with improved survival when compared with interferon-alpha. This model was more favourable adverse events and was also sensitive to the probability of developing cataracts and requiring a hysterectomy. The base case ICER was $25,819/QALY gained, treatment costs, and incremental cost-effectiveness ratios (ICER). Over a lifetime, multimodal screening was estimated to cost an additional $820 with an expected gain of 0.0037 quality adjusted life years (QALY) or an incremental cost-effectiveness ratio (ICER) of $221,622/QALY compared to no screening for age 65-70 postmenopausal females. Compared with annual transvaginal ultrasound (TVU) screening, multimodal screening improves cost-effectiveness by avoiding unnecessary TVU and surgery, which are risky to the patient and costly to the healthcare system. Cancer incidence rates and time required for screening are significant factors which impact the cost-effectiveness results. Our study estimated the cost-effectiveness of multimodal screening is not clearly cost-effective, compared to commonly accepted willingness-to-pay thresholds in oncology ($120,000-$130,000/QALY). If high risk women were selected for multimodal screening or if the screening was administered as part of another medical office visit in order to decrease the time required for screening test, the ICER could be lower than $120,000/QALY.

PCN73

COST-EFFECTIVENESS OF PROMOTORA LED HEALTH EDUCATION INTERVENTIONS TO INCREASE CERVICAL CANCER SCREENING AMONG LOW INCOME HISPANIC WOMEN

Laizon DR1, Zhang YC2, Byrd TL3, Smith JL4, Wilson KM4
1University of Texas Houston School of Public Health, Houston, TX, USA, 2University of Texas School of Public Health, Houston, TX, USA, 3University of Texas School of Public Health, El Paso, TX, USA, 4Centers for Disease Control and Prevention, Atlanta, GA, USA

OBJECTIVES: We conducted an economic evaluation with cost and outcome data from a randomized controlled trial of promotorá led interventions to increase cervical cancer screening among three populations of low income Hispanic women. METHODS: Hispanic women of Mexican origin, age 21 to 65, with no previous cervical cancer, no hysterectomy, and no Pap test within the last 3 years from El Paso, Houston, TX and Yakima Valley, WA were randomly assigned to four intervention arms: control, video, flip chart, and full (combination of video and flip chart) interventions. Costs, including recruitment cost, from both payer and client perspectives were used to estimate intervention costs. Effectiveness measures were the prevalence of a self-reported pap test within 6 months after the intervention, analyzed under the condition of intention-to-treat. Incremental cost-effectiveness ratios (ICERs) were the incremental cost per additional women screened. RESULTS: The total cost per participant, was $216 for video, $219 for flip chart, and $223 in the full intervention. The proportion of women reporting a Pap test was 0.261 in the control arm, 0.484 in the video arm, 0.515 in the flip chart arm and 0.568 in the full intervention arm. The ICERs were $9686 comparing the control arm to the video, $94 comparing the video to flip chart arm and $72 comparing flip chart to the full intervention arm. CONCLUSIONS: The promotoría led interventions had important and statistically significant effects on screening behavior and compare favorably with the other two strategies designed to promote cervical cancer screening in the study. The study provides economic information for health educators in designing and budgeting promotora based cancer screening promotion programs for low income Hispanic women.

PCN74

COST-EFFECTIVENESS OF EGFR MUTATION TESTING IN PATIENTS WITH ADVANCED NON-SMALL-CELL LUNG-CANCER (NSCLC) TREATED WITH GEFitinib OR CARBOPLATIN-PLAxtalTEx

Arrieta O1, Araya P2, López RJ2, Pelanco AC3
1National Cancer Institute of Mexico, D.F., Mexico, 2Astrazeneca, Naucalpan, Mexico

OBJECTIVES: To assess the cost-effectiveness of an EGFR mutation testing strategy when considering 1st line therapy of anNSCLC with gefitinib for mutation positive and carboplatin-platxal (CP) for mutation negative disease. METHODS: A Discrete Event Simulation (DES) was designed to emulate two strategies for treating patients with aNSCLC. In the first strategy, patients were tested for EGFR genetic mutation and treated if gefitinib is positive and CP is negative. In the second strategy, patients were not tested for genetic mutation and all of them received CP treatment. Probabilities for adverse events and progression-free survival (PFS) were obtained from the IPASS clinical study (Mok et al 2009). The mutation rate used was 13% and a sensitivity analysis was run on this variable. A Markov model using micro simulation was also built to compare results of the DES model and assess internal validity. Both models were run 10 times with 1000 patients for each strategy. Cost-effectiveness ratios were obtained for the testing and non-testing strategies and particularly for positive tested patients treated with gefitinib. RESULTS: Mean PFS (generally lower for patients with mutation positive disease treated with gefitinib than CP) was 11.51 (95% CI, 11.10-11.92) months. PFS of patients who where tested for EGFR mutation (positive and negative) was 7.37 (95% CI, 7.50-7.64) months. Patients in the second strategy (with no testing) yielded 7.11 (95% CI, 6.85-7.17) progressions free survival. Incremental cost-effectiveness ratio (ICER) of the testing strategy (including test cost) over the no-testing strategy was $1379.49 (95% CI, $1120.10-$1656.88) per progression-free month. CONCLUSIONS: According to this analysis, testing aNSCLC patients for