

## Abstracts

A37

years, was 95.1% in the case of GCSF+plerixafor therapy compared to 42.61% 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\$93,325, which represents a 62% saving for an actual year of therapy. Therefore, the GCSF+Plerixafor treatment results in a more effective, less costly, and finally 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 hematopoietic stem cell transplantation.

PCN71

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

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**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 35 to 80 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\$150000/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. **RESULTS:** 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\$30,133/QALY gained at age 60 and 35 respectively. The model was most sensitive to raloxifene cost, the ICER varying by +/-26.5% when the cost varied by +/-25%. The model was also sensitive to the probability of developing cataracts and requiring 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 21 times respectively. **CONCLUSIONS:** Raloxifene was found to be cost effective compared to tamoxifen in the target population due to its more favourable adverse effect profile, despite both drugs having similar efficacy in the chemoprevention of breast cancer.

PCN72

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

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**OBJECTIVES:** Elaborate an economic evaluation based in a cost-effectiveness model to compare sunitinib versus interferon- $\alpha$  (IFN $\alpha$ ) and bevacizumab + IFN $\alpha$  as first line therapy for metastatic renal clear cell carcinoma, in Brazilian Private Health System perspective. **METHODS:** A Markov model, with 6 weeks cycles and a 2-year time horizon was developed in Microsoft Excel to evaluate the cost-effectiveness of sunitinib vs. IFN $\alpha$  and bevacizumab + IFN $\alpha$ , considering resources from the Brazilian Private Health Care. The model considered that the patients received active treatment until drug fail. After progression confirmation, patients were treated with a second line of active treatment or best supportive care (progression monitoring and palliative treatment). Results were expressed as life-years (LY) gained, progression-free LY (PFLY) gained, treatment costs, and incremental cost-effectiveness ratios (ICER) **RESULTS:** In comparison with IFN $\alpha$ , sunitinib increases LY and PFLY by 0.08 and 0.33 years respectively, with ICER of R\$324,172 (US\$190,689 Purchasing Power Parity 2009, 1US\$ = 1,7R\$). In comparison with bevacizumab + IFN $\alpha$ , sunitinib was dominant as both more effective (with 0.04 LY and 0.09 PFLY gained) and less costly, with a negative ICER of R\$ 2,169,212 (US\$ 1,549,437) over 2 years, meaning a cost saving of R\$ 2,169,212 over the combination therapy. **CONCLUSIONS:** This model suggests that when taking the perspective of the Brazilian Private Health Care System, sunitinib achieved overall cost saving with improved survival when compared with bevacizumab + IFN $\alpha$  in a 2 years time horizon. In comparison to IFN $\alpha$ , sunitinib promoted better results on efficacy parameters, with an incremental cost in the same time horizon.

PCN73

#### COST-EFFECTIVENESS ANALYSIS OF MULTIMODAL SCREENING FOR OVARIAN CANCER

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**OBJECTIVES:** The main objective was to assess cost-effectiveness of multimodal screening for ovarian cancer (Annual screening with CA125 marker, followed by transvaginal ultrasound for those at increased risk according to CA125 level) from the US societal perspective. The secondary objective was to facilitate an economic compari-

son between two different screening strategies (multimodal screening and ultrasound screening), which have been proven to be effective in improving early detection of ovarian cancer. **METHODS:** A lifetime incremental cost-effectiveness model was constructed to calculate the increase of costs, and QALYs gained by the multimodal screening. In this 'backward induction' model, the expected costs and outcomes for each 5-year time-interval are incorporated in subsequent 5-year time period calculations over the patient's entire lifetime. The sensitivity and specificity of screening, and the stage distribution of detected ovarian cancer by the screening were obtained from the NCT00058032 clinical trial. The model used a 3% discount rate and reported results in 2009 US dollars. **RESULTS:** 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 65–69 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 health care system. Cancer incidence rates and time required for screening exhibited substantial impact on the model from sensitivity analyses. **CONCLUSIONS:** Multimodal screening is not clearly cost-effective, compared to commonly accepted willingness-to-pay thresholds in oncology (\$120,000–\$150,000/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.

PCN74

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

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**OBJECTIVES:** We conducted an economic evaluation with cost and outcome data from a randomized controlled trial of promotora 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) intervention. Micro costing, 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. 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 \$968 comparing the control arm to the movie, \$94 comparing the movie to flip chart arm and \$72 comparing flip chart to the full intervention arm. **CONCLUSIONS:** The promotora led full 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.

PCN75

#### COST-EFFECTIVENESS ANALYSIS OF EGFR MUTATION TESTING IN PATIENTS WITH ADVANCED NON SMALL-CELL LUNG CANCER (ANSLC) TREATED WITH GEFITINIB OR CARBOPLATIN-PACLITAXEL

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**OBJECTIVES:** To assess the cost-effectiveness of an EGFR mutation testing strategy when considering 1<sup>st</sup>-line therapy of aNSCLC with gefitinib for mutation positive and carboplatin-paclitaxel (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 given gefitinib if positive and CP if 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 over this variable. A Markov model using micro simulation was also built to compare results of the DES model and assure internal validity. Both models were run 10 times with 1000 patients for each strategy. Cost-effectiveness ratios were obtained for the testing and not-testing strategies and particularly for positive tested patients treated with gefitinib. **RESULTS:** Mean PFS (generated by DES) of tested patients with mutation positive disease treated with gefitinib was 11.51 (95% CI, 11.10–11.92) months. PFS of patients who where tested for EGFR mutation (positive and negative) was 7.57 (95% CI, 7.50–7.64) months. Patients in the second strategy (without testing) yielded 7.11(95% CI, 7.05–7.17) progression-free months. Incremental cost-effectiveness ratio (ICER) of the testing strategy (including test cost) over the not-testing strategy was \$1379.49 (95% IC, \$1102.10–\$1656.88) per progression-free month. **CONCLUSIONS:** According to this analysis, testing aNSCLC patients for