plete cytogenetic and molecular. Prognosis was assigned to each category, according to disease progression and mortality. Prognosis was also assigned to BMT patients. Unit costs were drawn from national databases, and multiplied by resource use (driven by response level and disease status) to estimate total costs. Health benefits were measured using quality-adjusted life years (QALYs), based on the patient's current health status and level of response. Univariate and probabilistic sensitivity analyses were conducted to estimate the confidence around the results. **RESULTS:** Dasatinib resulted in 6.425 QALYs, at a total cost of £314,413, per patient. QALYs and costs for comparators were as follows: imatinib 400mg, 1.485, £135,326; imatinib 600mg, 2.394, £173,705; imatininb 800mg, 5.910, £350,365; nilotinib, 6.235, £228,576; interferon-a, 1.664, £6,764; BMT, 4.738, £302, 937. Incremental cost-effectiveness ratios (ICER) for dasatinib against competitors were as follows: imatinib 400mg, £36,251; imatinib 600mg, £34,907; imatinib 800mg, dominant; nilotinib, dominant; interferon-a, £38,877; BMT, dominant. **CONCLUSIONS:** Dasatinib was more effective than imatinib 400mg, 600mg 800mg, nilotinib, interferon-a and BMT in the treatment of chronic-phase imatinib-resistant patients CML. The analysis estimates dasatinib treatment to be less costly than imatinib 800mg, nilotinib and BMT, dominating these treatments in the cost-effectiveness analysis. Dasatinib is therefore a cost-effective treatment option for patients in the CP of CML.

PCN69

AN ECONOMIC EVALUATION OF DASATINIB FOR THE TREATMENT OF IMATINIB RESISTANT PATIENTS WITH ADVANCED PHASE CHRONIC MYELOGENOUS LEUKAEMIA

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OBJECTIVES: Chronic myelogenous leukaemia (CML) is a progressive disease associated with significant health and economic burden. This study estimates the lifetime costs and health outcomes associated with dasatinib in the treatment of imatinib-resistant CML patients who have the accelerated or blast stages of the disease. **METHODS:** A Markov model was developed to estimate lifetime outcomes based on initial best response, which was defined as: no response, complete haematologic, partial cytogenetic, complete cytogenetic, molecular. Prognosis was assigned to each category, according to disease progression and mortality. Unit costs were drawn from national databases, and multiplied by resource use (driven by response level and disease status) to estimate total costs. Health benefits were measured using quality-adjusted life years (QALYs), based on patients' health status and response. Univariate and probabilistic sensitivity analyses were conducted to estimate confidence around the results. **RESULTS:** In AP, dasatinib resulted in 2.603 QALYs, at a cost of £170,478 per patient. QALYs and costs for comparators were: imatinib 600mg, 0.583, £88,949; imatininb 800mg, 0.583, £96,552; nilotinib, 1.697, £141,128; BMT, 2.861, £230,277. Incremental cost-effectiveness ratios (ICER) for dasatinib against competitors were: imatinib 600mg, £40,357; imatinib 800mg, £36,594; nilotinib, £32,405, BMT, £231,650. In BP, dasatinib resulted in 0.485 QALYs, at a total cost of £105,103, per patient. QALYs and costs for comparators were: imatinib 600mg, 0.240, £108,306; imatinib 800mg, 0.240, £115,123; BMT, 1.757, £173,892. ICERs for dasatinib against competitors were: imatinib 600mg, dominant; imatinib 800mg, dominant; BMT, £54,093. **CONCLUSIONS:** In imatinib-resistant AP CML, dasatinib was more effective than imatinib 600mg, 800mg and nilotinib, and less costly than BMT. In BP CML, dasatinib was more effective than imatinib 600mg and 800mg and less costly than imatinib 600mg, 800mg, nilotinib and BMT. Dasatinib is, therefore, cost-effectiveness when compared against other pharmacological interventions in the treatment of advanced stages of CML.

PCN70

USING PHARMACOECONOMIC MODELING TO DETERMINE A VALUE-BASED PRICE OF NEW CANCER DRUGS IN MALAYSIA

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OBJECTIVES: Decision analysis (DA) is commonly used to perform economic evaluations of new pharmaceuticals. However, DA analyses can also be used to determine a drug price that would be considered cost effective based on recommended thresholds for economic value. Using multiples of Malaysia's per capita GDP as the threshold for economic value as suggested by the World Health Organization (WHO), DA was used to estimate a price per dose for bevacizumab in Malaysia, a drug that provides a 1.4 month survival benefit to patients with metastatic colorectal cancer (mCRC). **METHODS:** A DA model was developed to simulate progression free and overall survival in mCRC patients receiving chemotherapy with and without bevacizumab. Outcomes for cancer control and side effects were obtained from randomized trials evaluating 1st and 2nd line chemotherapy in mCRC. Costs for chemotherapy and side effects management were obtained from both public and private hospitals in Malaysia. Utility estimates measured as quality adjusted life years (QALYs) were determined by interviewing 24 oncology nurses using the Time Trade-Off technique. The price per dose was then estimated using a target threshold of $44,400 per QALY gained, which is three times the Malaysian per capita GDP. **RESULTS:** A cost effective price for bevacizumab could not be reached because of the short survival benefit provided. If the drug were able to improve survival from 1.4 to 3 or 6 months, then the price per dose could be $U.S.567 and $U.S.1,258 and be considered cost effective in Malaysia according to the WHO criteria. **CONCLUSIONS:** The use of DA modeling for estimating drug price is a powerful technique to ensure value for money. Such information can be of value to both drug manufacturers and formulary committees because it would facilitate negotiations for value-based pricing in a given jurisdiction.

PCN71

USING MEASURES OF SOCIETAL VALUE AND ECONOMIC MODELING TO ESTIMATE PRICES FOR CANCER DRUGS IN SOUTH AFRICA

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OBJECTIVES: One of the major barriers to cancer drug access has been price, which is often beyond the means of national health care budgets in less developed countries. In this study, we present a novel approach to estimate a value based price for new cancer drugs that considers the wealth of a nation. To demonstrate this approach, pharmacoeconomic (PE) modeling was used to estimate a value based South African price for bevacizumab, a drug that provides a 1.4 month survival benefit to patients with metastatic colorectal cancer (mCRC). The threshold used for economic value was 3 times the South African per capita gross domestic product (GDP), as recommended by the World Health Organization (WHO). **METHODS:** A PE model was developed to simulate the outcomes in mCRC patients receiving chemotherapy ± bevacizumab. Clinical data were obtained from randomized trials and costs from a South African cancer center. Utility estimates were determined by interviewing 16 oncology nurses involved in the care of mCRC patients. A price per dose of bevacizumab was then estimated using a target threshold of $U.S.32,000 per quality adjusted life year (QALY) gained, which is 3 times the South African per capita GDP. **RESULTS:** A cost effective price for bevacizumab could not be reached because of the short survival benefit. If the drug were able to improve survival from 1.4 to 3 or 6 months, then the price per dose could be $U.S.58.00 and $U.S.258.00 and be considered cost effective in South Africa according to the WHO criteria. **CONCLUSIONS:** A value based pricing approach using PE modeling and the WHO criteria for economic value is feasible for South Africa. This approach would be a good starting point for opening dialogue between medical schemes and the pharmaceutical industry to identify an optimal drug price that would be acceptable to all of the key stakeholders.

PCN72

GENE EXPRESSION PROFILING FOR GUIDING ADJUVANT CHEMOTHERAPY DECISIONS IN WOMEN WITH EARLY BREAST CANCER: A COST-EFFECTIVENESS ANALYSIS OF 1000 STRATEGIES FOR THE PROVISION OF ADJUVANT! ONLINE, ONCOTYPE DX AND CHEMOTHERAPY

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OBJECTIVES: Adjuvant chemotherapy decisions for women with early-stage breast cancer are complex. Oncotype DX, a gene expression profiling test, is validated at predicting distant recurrence-free response in patients with ER+ LN- early-stage breast cancer. This enables chemotherapy to be better targeted at higher risk patients than is possible through the use of Adjuvant! Online (AOL) or clinical judgement alone. However, existing cost-effectiveness analyses of Oncotype DX have numerous limitations: in particular, they consider a limited range of strategies and do not separately consider intermediate risk patients identified through either AOL or Oncotype DX. Our objective was to build an Ontario-based cost-effectiveness analysis which comprehensively addresses these limitations. **METHODS:** We built upon a Markov model developed by Tsoi and colleagues, using data from the NSABP B-14 and B-20 clinical trials. We assumed that AOL and Oncotype DX may be provided separately or sequentially and considered the chemotherapy decision separately for every possible risk group, resulting in 1000 unique strategies for the provision of AOL, Oncotype DX and chemotherapy. **RESULTS:** Oncotype DX appears cost-effective for all patients, regardless of a patient's initial AOL risk assessment. The highest ICER is in patients at low AOL risk ($29,000 per QALY), while Oncotype DX dominates in patients at high AOL risk. Chemotherapy appears cost-effective only in patients at intermediate or high Oncotype DX risk. The highest ICER is in patients at low AOL and intermediate Oncotype DX risk ($64,000 per QALY). Chemotherapy is dominated in patients at low Oncotype DX risk. **CONCLUSIONS:** Oncotype DX appears to be cost-effective for all Ontario women with ER+ LN- early-stage breast cancer, regardless of the woman's initial AOL risk assessment. These results have informed the Ontario Health Technology Advisory Committee's recent deliberations regarding the funding of Oncotype DX in Ontario.

PCN73

UTILISATION OF ANTINEOPLASTIC AGENTS IN SLOVAK REPUBLIC

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OBJECTIVES: The main objective of this study was to evaluate the utilisation of antineoplastic drugs during the period of 2004-2009 in Slovak Republic. **METHODS:** Data involving the number of medicine packages, DDD and financial expenditures abstracted from the Slovak Institute for Drug control were analysed to evaluate the antineoplastic agents consumption. **RESULTS:** The obtained data showed slight increase in antineoplastic agents consumption from 2004 (21,03 DID (DDD/1000 inhabitants/ day) to 2007 (30,94 DID). Between 2007 and 2009 slight decrase in DID (from 30,94 in 2007 to 27,10 in 2009) was observed. Antimetabolits raised DID consumption between 2004 (9,88) and 2007 (14,13) and declined in 2009 (10,12). The consumption of alkylating agents in terms of DID was varying from 4,4 in 2004 to 8,3 in 2007 and 7,38 in 2009, cytotoxic antibiotics and related substances reached 0,41 in 2004, 0,74 in 2007 and 0,73 in 2009, plant alkaloids and other natural products quoted 2,04 in 2004 and 2,67 in 2009. Total expenditures for antineoplastic drugs multiplied from 21 736 185 € (2004) to 105 589 161 € (2009). Highest consumption in terms of financial units was reached in 2004 by: docetaxel (2 328 233€), paclitaxel (2 259 313€) and gemcitabine (2 062 914€); in 2009 by: bevacizumab (17 049 381 €),