adherence various. This original approach could be useful to perform budget impact studies before implementing large public health screening programs.

**PCN27**

**COST-EFFECTIVENESS ANALYSIS OF SCREENING SUBJECTS WITH DIFFERENT LEVELS OF RISK FOR HEPATOCELLULAR CARCINOMA IN TAIWAN**

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**OBJECTIVE:** The American Association for the Study of Liver Diseases 2005 practice guidelines recommended that various groups at different levels of risk to hepatocellular carcinoma (HCC) undergo surveillance. This study aimed to assess which high risk group had the lowest incremental cost-effectiveness ratio (ICER) for the HCC screening program from the insurer’s perspective.  

**METHODS:** The high risk subjects were identified from the communities with high prevalence of hepatitis viral infection and classified into three groups at different levels of risk to HCC at the time of enrollment. The repeated ultrasound screenings at an interval of three, six, and twelve months were applied to cirrhosis group, early cirrhosis group, and no cirrhosis group, respectively. The Markov-based decision model was constructed to simulate progression of HCC and to estimate the ICER for each group over a time horizon of 50 years or the subjects’ remaining life expectancy. Validity of the model outcomes was examined against the health statistics.  

**RESULTS:** The incremental ICER for the cirrhosis group, early cirrhosis group, and no cirrhosis group were $1375, $816, and $861, respectively. Among the three groups, the early cirrhosis group had the highest incremental effect (3.41 years per person) and the cirrhosis group had the largest incremental cost ($4247 per person). It is noteworthy that when compared to the other two groups, the cirrhosis group showed the lowest incremental effect (2.03 year) and the highest incremental cost ($4247).  

**CONCLUSION:** Screening the no cirrhosis group for HCC at a 12-month interval had the lowest incremental cost-effectiveness ratio.

**PCN28**

**COST-EFFECTIVENESS ANALYSIS OF RITUXIMAB-CHOP VS. CHOP ON NON-HODGKIN LYMPHOMA PATIENTS IN THE MEXICAN CONTEXT**

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**OBJECTIVE:** This study is intended to evaluate the costs derived from the treatment of aggressive and indolent Non-Hodgkin Lymphoma (NHL), in patients treated with R-CHOP vs. CHOP in order to provide solid pharmacoeconomic arguments for decision-makers in regards to a cost-effective therapy for patients with NHL and hence have a more efficient allocation of resources.  

**METHODS:** A cost-effectiveness analysis model was developed based on the efficacy reports of the international literature in regards to treatment of NHL estimating the probabilities of no remission or disease relapse and the costs of treatment failure and those derived from salvage therapies used. This was calculated in a time horizon of 3 years with a 5% discount rate, based on public health care institutions perspective.  

**RESULTS:** The results of the model using a cohort of 200 hypothetic NHL patients, 100: aggressive-NHL and 100: indolent-NHL, in which 50% received treatment with R-CHOP and the other half with CHOP showed that the use of Rituximab in addition to the CHOP therapy in the case of patients with Aggressive NHL represents savings per patient in complete remission of USD$138,530.33. In the case of patients with Indolent NHL the savings were USD$1,366,417.78. Both savings represents the possibility to obtain 10 more patients in complete remission (3 and 7 respectively).  

**CONCLUSION:** The use of Rituximab in addition to CHOP as first line therapy for NHL is not only a cost-effective intervention when compared to CHOP therapy in the Mexican context, but, according to the results, it is also a cost-saving intervention with an average saving of USD$821,739.23.

**PCN29**

**SCREENING, PREVENTION, AND TREATMENT OF CERVICAL CANCER—A GLOBAL AND REGIONAL GENERALIZED COST-EFFECTIVENESS ANALYSIS**

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**OBJECTIVE:** The paper calculates regional generalized cost-effectiveness estimates of screening, prevention, treatment and combined interventions for cervical cancer.  

**METHODS:** Standardised WHO-CHOICE methodology was used. A cervical cancer model was employed to provide estimates of screening, vaccination and treatment effectiveness. Intervention effectiveness was determined via a population state-transition model (PopMod) that simulates the evolution of a sub-regional population accounting for births, deaths and disease epidemiology. Economic costs of procedures and treatment were estimated, including programme overhead and training costs.  

**RESULTS:** In regions characterised by high income, low mortality and high existing treatment coverage, the addition of any screening programme to the current high treatment levels is very cost effective. However, based on projections of the future price per dose (representing the economic costs of the vaccination excluding monopolistic rents and vaccine development cost) vaccination is the most cost-effective intervention. In regions characterized by low income, low mortality and existing treatment coverage around 50%, expanding treatment with or without combining it with screening appears to be cost effective or very cost-effective. Abandoning treatment in favour of screening in a no-treatment scenario would not be cost effective. Vaccination is usually the most cost-effective intervention, however in some regions one-off PAP or VIA screening at age 40 are more cost-effective than other interventions though less effective overall. In regions characterised by low income, high mortality and low treatment levels, expanding treatment with or without adding screening would be very cost-effective. One-off PAP or VIA screening at age 40 are more cost-effective than other interventions though less effective overall.  

**CONCLUSION:** From a cost-effectiveness perspective, consideration should be given to implementing vaccination (depending on cost per dose) and screening programmes on a worldwide basis to reduce the burden of disease from cervical cancer. Treatment should also be increased where coverage is low.

**PCN30**

**COSTS RELATED TO ADVERSE EVENTS IN CHRONIC MYELOID LEUKEMIA PATIENTS TREATED WITH TYROSINE KINASE INHIBITORS IN CANADA**

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**OBJECTIVE:** Treatment options for the relatively small group of patients resistant or intolerant to imatinib, a recommended first-line therapy for chronic myeloid leukemia (CML), include nilotinib or dasatinib. Current data indicates that nilotinib and
PCN31

A PROBABILISTIC DECISION MODEL TO GUIDE OPTIMAL HEALTH POLICY DECISIONS FOR LUNG CANCER SCREENING

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OBJECTIVES: We developed a probabilistic decision model of cost-effectiveness for lung cancer (LC) screening with helical computed tomography (hCT) compared with chest x-ray (CXR) and no screening (NS) given uncertain efficacy and risks of screening in practice. METHODS: Markov cohort simulation model was used with an annual cycle length and which mimics the natural history of HPV infection to CC. The analysis was undertaken from the health care system perspective. Results were sensitive to age at annual screening initiation and termination. CONCLUSIONS: Assuming stage shifts observed with LC screening translate into survival benefits, hCT was, as expected, most efficacious, but also had the highest false positive rate. The associated detrimental cost and quality of life effects resulted in hCT being dominated by CXR (less efficacious but more specific).

PCN32

COST-EFFECTIVENESS ANALYSIS OF AN HPV-16/18 PROPHYLACTIC CERVICAL CANCER VACCINE IN A SETTING OF EXISTING SCREENING IN PORTUGAL—RESULTS FROM A MATHEMATICAL MODEL

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OBJECTIVE: To examine the cost-effectiveness of introducing an HPV-16/18 prophylactic cervical cancer (CC) vaccine in a setting of existing screening in Portugal. METHODS: A Markov cohort simulation model was used with an annual cycle length and which mimics the natural history of HPV infection to CC. The analysis was undertaken from the health care system perspective. Results were sensitive to assumptions about the discount rate and age at which vaccination begins. The base-case strategy was robust to variations in vaccination coverage and fairly robust to changes in both percentages of onco-Cervical and of opportunistic screening rates. CONCLUSION: The analysis suggested that prophylactic cervical cancer vaccination could have a substantial public health benefit. A vaccine directed specifically at oncogenic HPV types 16 and 18, during substantial public health benefit. A vaccine directed specifically at 12-year-old girls would be cost-effective and could reduce lifetime CC cases and mortality by 92% compared with current screening. Vaccination was predicted to substantially reduce the number of oncogenic HPV infections and Cervical Intraepithelial Neoplasia cases (CIN1-3 cases). The additional cost of generating one QALY by implementing a vaccination strategy, where all 12-year-old girls are vaccinated with a vaccine showing 96.7% efficacy against HPV-16/18, was €131,810. The results were sensitive to alternative assumptions about the discount rate and age at which vaccination begins. The base-case strategy was robust to modifications in vaccination coverage and fairly robust to changes in both percentages of onco-Cervical and of opportunistic screening rates. CONCLUSION: The analysis suggested that prophylactic cervical cancer vaccination could have a substantial public health benefit. A vaccine directed specifically at reducing the incidence of oncogenic HPV types 16 and 18, during the peak ages of infection, could be expected to be economically attractive.

PCN33

COST UTILITY ANALYSIS OF VACCINATION AGAINST HPV IN ISRAEL

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OBJECTIVE: Determine appropriate scenarios for screening compliance for cervical cancer in Israel. METHODS: Generalised cost-effectiveness estimates of screening (PAP, HPV-DNA, VIA at various frequencies) and/or HPV vaccination interventions for cervical cancer in Israel were calculated using WHO-CHOICE standardised methodology, utilising a state transition population model (POPMOD) simulating Israeli population...