OBJECTIVES: To evaluate the health and economic benefits of different screening and vaccination strategies against cervical cancer in the Philippines. METHODS: A cost-utility analysis was conducted using an existing semi-Markov model to evaluate different screening (i.e. Pap smear, visual acetic acid) and vaccination strategies against HIV infection implemented alone or as part of a combination strategy at different coverage scenarios. From a health system perspective, the researchers ran the model using country-specific epidemiology, cost and clinical parameters. Sensitivity analysis was performed for vaccine efficacy, duration of protection and costs of vaccination, screening and treatment. RESULTS: Across all coverage scenarios, it was found that a combination of cost-saving strategies, ranging from -Php 191,099 to Php 61,058.73 per QALY gained. Due to its high cost in the Philippines, Pap smear was found to be not cost-effective. At a cost of Php 2,400 per vaccinated girl, vaccination was found to be cost-effective at a threshold of 1 GDP per capita with the most favorable assumptions, providing lifelong immunity against high-risk oncogenic HPV types 16/18. The highest incremental QALY gain was achieved with 80% coverage of the combined strategy of VIA at 35 to 45 years old done every five years following vaccination at 11 years of age with an ICER of Php 33,126. HPV vaccination becomes less cost-effective when vaccine protection lasts for less than 15 years. CONCLUSIONS: High VIA coverage targeting women aged 35-45 old at five-year intervals is the most efficient and cost-saving strategy to reduce cervical cancer burden in the Philippines. Adding a vaccination program among 11-year-old girls at a cost of Php 2,400 per vaccinated child is potentially cost-effective with the most favorable assumption that the vaccines provide lifelong immunity against HPV 16/18.

PCN25 MEASURING THE TREND OF USE OF TARGETED THERAPY AND ECONOMIC EVALUATION OF GEFITINIB FOR ADVANCED NON-SMALL CELL LUNG CANCER (NSCLC) IN SINGAPORE
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OBJECTIVES: Cancer therapy has been revolutionized by the introduction of targeted therapy. Tremendous growth of its utilization was observed in Singapore over the past decade. Despite high treatment cost, most of the targeted therapies were not funded by Singapore’s unique health care financing system. Hence, this study aims to determine the trends of use of targeted therapy in National Cancer Centre Singapore from 2007-2011. In addition, treatment response and economic evaluation of gefitinib as a targeted therapy for advanced NSCLC will be conducted to aid decision making.
METHODS: In this retrospective study, number of patients and annual consumption costs for each targeted therapy were determined. A total of 124 chemotherapy naïve patients were identified to examine treatment response and economic use of gefitinib. These were reviewed via electronic databases and medical reports. A Markov model was developed by using patient level data and utility values from literature. Cost utility analysis was performed from health care provider’s perspective with the cost of direct medical costs (2012 Singapore dollar) and discount rate of 3%. RESULTS: Dominant trends were observed in utilization of Trastuzumab (35%), Gefitinib (25%) and Bevacizumab (12%) over last 5 years. For Gefitinib, partial response and stable disease were 23% and 64% respectively. It resulted in a gain of 73.23 progression free days and 2.87 quality adjusted life year (QALY) with an additional cost of $830,819.28. As a result, incremental cost-utility ratio (ICUR) of Gefitinib was $10.19/QALY and it was most sensitive to the cost of Gefitinib in sensitivity analysis. CONCLUSIONS: Top three drugs with high utilization and consumption costs were Trastuzumab, Gefitinib and Bevacizumab. If the acceptable ICUR threshold in Singapore is 1 to 3 times of gross domestic product range, gefitinib can be considered as cost-effective compared to chemotherapy as first line treatment of NSCLC for local population.

PCN26 IMPACT OF VACCINATION ON HEALTH IMPACT AND COST-EFFECTIVENESS TO MAKE INFORMED POLICY DECISION ON THE INTRODUCTION OF HUMAN PAPILLOMAVIRUS (HPV) VACCINE TO THE NATIONAL IMMUNIZATION PROGRAM (NIP) IN THAILAND
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OBJECTIVES: This study estimated health impact and cost-effectiveness of adding a quadrivalent HPV vaccine program for preadolescent girls to the existing cervical cancer screening program from the Thai payer perspective. METHODS: A published Markov model was adapted to Thailand setting. Both direct and indirect (herd immunity) benefits were captured by the model. Model inputs were obtained from literature, unpublished data and expert opinion. A proposed tender process of vaccination led to a decision to purchase the vaccine. Administration costs were used as vaccine-related costs to reflect the real situation of Thailand school-based HPV vaccination. Future costs and outcomes were discounted at 3%. Two vaccination strategies of combining cervical screening with HPV vaccination (10- to 12-year-old females) and with non-vaccine catch-up vaccination (13- to 24-year-old females) were compared to screening program alone. RESULTS: Adding HPV vaccination to the screening program provided both short- and long-term health benefits. Compared with current screening practice over 100 years, routine vaccination reduced cumulative incidence of cervical cancer (-54%), CIN1 (-71%), CIN2/3 (-70%), genital warts among females (-75%) and males (-63%) and cervical cancer deaths (-52%). Routine vaccination also resulted in reduction of disease costs for cervical cancer (-24%), CIN (-42), CIN2/3 (-41%), genital warts in females (-52%) and males (-42%). The reduction in HPV6/11-related disease incidence costs and incidence avoided relatively soon after vaccination, especially CIN. In addition, the recommended HPV2/6/11/16 THB/QALY, both routine and routine plus catch-up programs are cost-effective with discounted incremental cost-effectiveness ratios (ICER) of $5,324 and 34,426 THB/QALY, respectively. Cervical cancer incidence decreased by 17% and 31% for both strategies with HPV6/11-related effects were excluded. CONCLUSIONS: The school-based HPV vaccination program, using the quadrivalent HPV vaccine, is cost-effective, particularly when catch-up vaccination is incorporated. The results support decision-making process to include HPV vaccination in Thailand NIP.

PCN27 COST-UTILITY ANALYSIS OF FIRST-LINE REGIMEN BETWEEN CISPLATIN PLUS PEMETREXID AND CARBOPLATIN PLUS PLACITAXEL IN ADVANCED NON-SQUAMOUS NON- Small-CELL LUNG CANCER IN THAILAND
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OBJECTIVES: Cisplatin plus pemetrexed (Cis/Pem) is a more costly chemotherapy regimen than carboplatin plus paclitaxel (Carb/Pac), but with the reports about its higher efficacy and less toxicity. Thus, this study aimed to assess the cost-utility of these two chemotherapy regimens in advanced non-squamous non-small cell lung cancer (NSCLC) in Thailand. METHODS: Economic study was conducted along a prospective cohort study in Maharaj Nakorn Chiang Mai hospital located in the north of Thailand. Patients aged 18 or above, diagnosed with non-squamous NSCLC with stage IIIb and IV, had performance status (ECOG) 0-1, and were treated either Cis/Pem or Carb/Pac was enrolled during January 2012 to June 2013. Direct and indirect costs were collected continuously and the societal perspective was measured in terms on time days to disease progression. The incremental cost per quality-adjusted time to disease progression was calculated. A series of sensitivity analyses were also performed. RESULTS: Of the total 54 patients, 36 received Carb/Pac and the remaining received Cis/Pem. Median time to disease progression was 119.94 days and 100.17 days for patients who received Cis/Pem and Carb/Pac respectively. Cis/Pem regimen had a higher total cost of 463,678 Bath per case while gained a slightly quality adjusted-time days to progression compared with Carb/Pac regimen. The resulted in 29,078.92 Baht per quality adjusted time days to progression per patient. CONCLUSIONS: Our findings suggested that Cis/Pem regimen gains slightly more effectiveness than Carb/Pac regimen with rising additional cost incurred. However, in cancer treatment, selection the appropriate treatment to individual patients might need to consider other aspects such as quality of life. Beyond only health care resources.

PCN28 ABRAXANE VERSUS TAXOL FOR PATIENTS WITH ADVANCED BREAST CANCER: A PROSPECTIVE TIME AND MOTION ANALYSIS FROM A CHINESE HEALTH CARE PERSPECTIVE
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OBJECTIVES: Abraxane® and Taxo® are both effective treatment for advanced stage breast cancer. However, each agent possesses unique drug delivery characteristics with the former not requiring premedication and having a considerably shorter recommended infusion time (i.e. 30 min vs. 2 h). To determine whether the increased efficacy and cost associated with Abraxane® relative to Taxo®, a time and motion study was undertaken in breast cancer patients treated in China. METHODS: Baseline data collection included patient and disease characteristics. Time and resource use data were then collected from breast patients being treated with Abraxane® (n=12) or Taxo® (n=15) in one of three cancer clinics located in Jiangsu, Shanghai and Beijing. Resource use and time impact on clinical staff were quantified using unit cost estimates. This included costs for drug preparation, administration, materials and supplies, premedication, patient chair time, labor costs and all acute adverse drug reactions. All costs were reported in USD ($1=6.1 RMB). RESULTS: Approximately 9 of 12 (75%) patients received Abraxane® as on a weekly schedule compared to 6 of 15 (40%) with Taxo®. There were 5 (33.3%) acute adverse drug reactions with Taxo®, 3 of which required a physician visit and the initiation of supportive interventions. In contrast, there was only one minor event with Abraxane® (2.5%), which was easily managed with a temporary stoppage of the infusion. From the time and motion study, the mean total time for Abraxane® and Taxo® delivery was 84 and 282 minutes (p < 0.001), with the associated costs being $159.34 and 250.36 respectively per dose (p < 0.01). CONCLUSIONS: To our knowledge, this is the first such study in breast cancer patients undertaken in China. Abraxane® was associated with fewer acute adverse drug reactions and significant reductions in health care resources, physician/nurse time and overall drug delivery costs compared to Taxo®.

CANCER – Patient-Related Outcomes & Patient Preference Studies

PCN29 ATTITUDE ASSESSMENT OF THE HUMAN PAPILLOMAVIRUS (HPV) IN HUNGARY
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OBJECTIVES: The aim of the study was to explore knowledge on HPV, and to learn about women’s attitudes to vaccination in Hungary. METHODS: A quantitative cross-sectional study was performed among the mothers of girls students in a public edu-