age was 53.3 ± 11.21 years, educated till secondary level (39.4%), Malays (44.2%) and married for 27.7 ± 12.12 years. Life expectancy gained from vaccination is 13.04 years and average Quality Adjusted Life-years saved (QALYs) is 24.40 in vaccinated versus 6.29 in unvaccinated women. Cost/QALYs saved for Pap smear at base case is RM 12,194.96/QALYs and RM 11,090.01/QALYs at increased screening coverage. In HPV vaccination, base case is at RM 35,346.79/QALYs and RM 46,310.08/QALYs when vaccination price is increased. In combined strategy, cost/QALYs at base case is RM 11,289.38/QALYs; RM 7712.74/QALYs at best case and RM 14,590.37/QALYs at worst case scenario. Incremental cost-effectiveness ratio (ICER) showed that screening at 70% coverage or higher is highly cost effective at RM 946.74 per QALYs saved and this is followed by combined strategy at RM 35,346.67 per QALYs saved. Budget impact analysis indicated that it cost the government RM 180.4 million per year and 2.5% of the national health budget. CONCLUSIONS: Vaccination increase life expectancy with better QOL. Cost effective strategies will include increasing the Pap smear coverage to 70% or higher. Since feasibility and long term screening adherence is doubtful among Malaysian women; vaccination of young women is more cost effective strategy against cervical cancer.

**PH10**

**COST-EFFECTIVENESS OF QUADRIVALENT AND BIVALENT HPV VACCINATIONS AGAINST CERVICAL CANCER**

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**OBJECTIVES:** Cervical cancer is the second highest incidence of female cancers in Malaysia. This can be avoided by Pap smear screening and Human Papillomavirus (HPV) vaccination i.e., the bivalent vaccine (BV) and quadrivalent (QV). Three pure cost-effectiveness (CE) options were compared i.e., screening via Pap smear; modeling of HPV vaccination (QV and BV) and combined strategy (screening plus vaccination). Scenario based sensitivity analysis using screening population coverage (40–80%) and costs of vaccine (RM 100–200/dose) were calculated. **METHODS:** This is a systematic review from 2006–2009 and respondents were interviewed from six public Gynecology–Oncology hospitals. Methods include experts’ panel discussions to estimate treatment costs by severity and direct interviews with respondents using costing and quality of life questionnaires. **RESULTS:** A total of 302 cervical cancer patients participated with mean age at 53.3 ± 11.21 years, Malays (44.2%) and married for 27.7 ± 12.12 years. Cost/QALYs for Pap smear at base case is RM 1,214.96/QALYs and RM 1,100.01/QALYs at increased screening coverage. In BV only, cost/QALYs saved in base case are at RM 15,662/QALYs and RM 24,203/QALYs when vaccination price is increased. In BV only, cost/QALYs saved in base case are at RM 13,359.07/QALYs and RM 23,590.17/QALYs when vaccination price is increased. In QV combined strategy cost/QALYs at base case is RM 4973/QALYs; RM 3395/QALYs at best case and RM 7992/QALYs at worst case scenario. In BV combined strategy, cost/QALYs at base case is RM 6624/QALYs; RM 4032/QALYs at best case and RM 10,543/QALYs at worst case scenario. Incremental cost-effectiveness ratio (ICER) showed that screening at 70% coverage or higher is highly cost effective at RM 946.74 per QALYs saved and this is followed by base case combined strategy with QV at RM 13,000 per QALYs saved. CONCLUSIONS: QV is more cost effective than BV. The QV combined strategy is more CE than any other method except Pap smear screening at high population coverage.

**PH11**

**IDENTIFYING COST-EFFECTIVE TREATMENT WITH RALOXIFENE IN POSTMENOPAUSAL WOMEN USING RISK ALGORITHMS FOR FRACTURES AND INVASIVE BREAST CANCER**

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**OBJECTIVES:** Raloxifene (RLX) reduces the risk of vertebral fractures and invasive breast cancer (IBC). The National Osteoporosis Foundation (NOF) has recommended a threshold for treatment initiation of 10-year major fracture risk of 20%, but given RLX’s beneficial efficacy on IBC it may be clinically beneficial and cost-effective to treat women with RLX even if they do not meet this threshold. The aim was to identify how 5-year IBC risk affects the cost-effectiveness of treating younger postmenopausal women who do not meet the 20% threshold. Fracture risk threshold with RLX compared to no intervention. **METHODS:** A micro-simulation model populated with data specific to American women was used to quantify the costs and benefits of 5-year treatment with RLX from a societal perspective. Possible events were vertebral fracture, non-vertebral fracture, IBC, VTE and death. EQ-5D utility scores were estimated using a quality-adjusted life-years (QALY) gained for no and RLX intervention. CONCLUSIONS: In simulated women, screening for and treating women at lower risk or when no preventive RLX effect on IBC was assumed, the cost-effectiveness of RLX decreased markedly and was not cost-effective given a willingness-to-pay of US$50,000. At fracture risk of 15–19.9%, RLX was cost-effective in young women at lower IBC risk. At lower fracture risk in combination with lower IBC risk or when no preventive RLX effect on IBC was assumed, the cost-effectiveness of RLX decreased markedly and was not cost-effective given a willingness-to-pay of US$50,000. At fracture risk of 15–19.9%, RLX was cost-effective in young women at lower IBC risk. CONCLUSIONS: RLX is potentially cost-effective in young postmenopausal women at elevated IBC risk who do not meet the suggested NOF 10-year fracture threshold. This highlights the importance of considering a woman’s full risk profile when deciding which anti-osteoporosis treatment to recommend.

**PH12**

**COST UTILİTY ANALYSIS OF HPV VACCİNAİON WITH BİVALENT A504 ADJUVANT VACCİNE IN SLOVAKIA AND IMPACT OF VACCİNE PROTECTION DURATION ON COST-EFFECTİVE ENDPONTS**

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**OBJECTIVES:** The study evaluated the cost effectiveness of the bivalent A504 adjuvant vaccine in Slovakia and the correlation between vaccine protection duration and incremental cost effectiveness of HPV vaccination of 12-year-old girls with bivalent A504 adjuvant vaccine in Slovakia. **METHODS:** A 1-year cycle Markov model (20—health state) used age-specific data on dysplasia or cervical cancer. A base case analysis assumed 98% vaccine efficacy against HPV—16/18 and 50% vaccination coverage.