

## PSY65

## COST-UTILITY ANALYSIS OF BOSUTINIB FOR PREVIOUSLY TREATED CHRONIC MYELOID LEUKEMIA (CML) IN PORTUGAL

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**OBJECTIVES:** To assess the incremental cost-utility ratio (ICUR) of bosutinib for CML as a third-line (3L) treatment for chronic phase (CP) Philadelphia chromosome-positive (Ph<sup>+</sup>) patients in Portugal compared to hydroxycarbamide, in the societal perspective. **METHODS:** A survival analysis model was adapted to the Portuguese setting. Bosutinib overall survival was based on Study 200, an open-label phase I/II single-arm study of Ph<sup>+</sup> CML patients. Overall survival with hydroxycarbamide and time spent in the accelerated and blastic phases, that are assumed to be independent of treatment, were estimated by an expert panel of five Portuguese haematologists. Resource consumption was elicited by this expert panel, being unit costs based on Portuguese official sources. Utility values were adapted from the IRIS study. A 5% discount rate was applied to both costs and consequences on a 50-year time horizon. **RESULTS:** The use of bosutinib allows an increase of 4.1 life years (LY) and 3.5 quality adjusted life years (QALY), being associated to an additional cost of 88,319€. Consequently, cost per LY is 21,465€ and cost per QALY is 25,252€. Sensitivity analysis shows that results are mainly driven by survival time gained with bosutinib. **CONCLUSIONS:** Bosutinib for CML 3L treatment for CP patients in Portugal represents a substantial added benefit relative to hydroxycarbamide although with added costs per LY and per QALY. These ratios are generally accepted in Portugal, both below 30,000€ willingness to pay threshold.

## PSY66

## COST EFFECTIVENESS OF ROMIPLOSTIM FOR THE TREATMENT OF IMMUNE THROMBOCYTOPENIA (ITP) PATIENTS IN THE CZECH REPUBLIC

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**OBJECTIVES:** To assess the cost-effectiveness of romiplostim in the treatment of adult patients with ITP in the Czech Republic, in comparison with the medical standard of care (SoC) and eltrombopag. **METHODS:** A lifetime treatment sequence cost-utility Markov model was developed from the health care payer perspective. The model was based on the treatment sequences that reflect current practice for ITP management and was driven by platelet response (platelet count  $\geq 50 \times 10^9/L$ ), which determined effectiveness and progression along the treatment pathway, need for rescue therapy and risk of bleeding. Costs were derived from reimbursement lists available in January 2013. Four scenarios were conducted where romiplostim was compared with SoC with rituximab, SoC without rituximab, SoC without both rituximab and mycophenolate mofetil (MMF), and eltrombopag. Patients were evaluated by splenectomy status and for the combined population (CP). **RESULTS:** Compared to SoC with rituximab, romiplostim was dominant in splenectomised patients and CP, with cost savings of 2,203,982CZK and 1,078,899CZK and gains of 1.58 and 1.81 quality-adjusted life-years (QALYs), respectively, and was cost-effective in non-splenectomised patients with an ICER of 44,107 CZK/QALY. Compared to eltrombopag, romiplostim was dominant in splenectomised patients and CP, with cost savings of 1,626,409CZK and 741,613CZK and gains of 1.12 and 1.21 QALYs, respectively, and was cost-effective in non-splenectomised patients with an ICER of 74,266 CZK/QALY. Similar results were shown in the other two scenarios: romiplostim was dominant in splenectomised patients and CP compared to SoC without rituximab and SoC without both rituximab and MMF, and was cost-effective in non-splenectomised patients with ICERs of 51,011CZK/QALY (SoC without rituximab) and 41,192CZK/QALY (SoC without rituximab and MMF). **CONCLUSIONS:** Romiplostim was less costly with higher QALY gain compared to SoC and eltrombopag in splenectomised patients and CP. Romiplostim was cost-effective with ICERs between 41,000 and 74,000CZK/QALY in all non-splenectomised populations in all four scenarios.

## PSY67

## COST-EFFECTIVENESS ANALYSIS OF CELECOXIB IN THE TREATMENT OF PATIENTS WITH CHRONIC PAIN IN JAPAN

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**OBJECTIVES:** To evaluate the cost-effectiveness of celecoxib compared with loxoprofen for the treatment of patients with chronic pain caused by osteoarthritis, rheumatoid arthritis and low back pain in Japan. **METHODS:** Using the Markov model, long-term simulations were conducted with a 3-month Markov cycle for each regimen of celecoxib vs. loxoprofen in the perspective of Japanese health care payers. The direct medical costs and quality-adjusted life years (QALYs) were estimated as outcome measures throughout the lifetime of patients. The base case population was aged 57 years which was the weighted mean age from the cited literature. All the costs were expressed as of March 2014, and annual discount rates of 2% were applied for both costs and health benefits. **RESULTS:** The incremental effectiveness of celecoxib compared with loxoprofen was 0.024 QALY while the incremental cost was JPY 73,785 (USD 716, USD 1 = JPY 103), indicating the incremental cost-effectiveness ratio (ICER) was JPY 3,131,480 (USD 30,403) per QALY gained. Sensitivity analyses identified two factors substantially sensitive to ICER: 1) decrease in efficacy of celecoxib in the recurrence of symptomatic ulcer, and 2) increase in utility of the primary disease that causes chronic pain while the administration of the drug halts. The literature review, however, supported that both of those sensitive cases are not so much likely to happen. **CONCLUSIONS:** Celecoxib was considered cost-effective compared with loxoprofen in patients with chronic pain in Japan.

## PSY68

## POPULATION-BASED COST-EFFICIENCY SIMULATION OF PARTIAL VERSUS COMPLETE THROMBOPROPHYLAXIS IN HOSPITALIZED PATIENTS IN SAUDI ARABIA: APPLICATION OF A BRITISH MODEL

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**OBJECTIVES:** Venous thromboembolism (VTE) is a frequent but preventable complication in hospitalized patients. The objective of this population-based simulation was to estimate, for Saudi Arabia and using a British (NICE) model, the cost-efficiency of partial versus complete thromboprophylaxis of hospitalized adult patients at medium-to-very-high (M2VH) -VTE risk. **METHODS:** Simulation including all 2012 Saudi adult medical (n=2,129,866) and surgical (n=964,033) hospital admissions, expressed in Saudi riyals (SAR), using three scenarios based on published real-world thromboprophylaxis studies: (1) international study and (2) Saudi subsample thereof (Cohen et al, Lancet 2008), and (3) Middle-Eastern study (Mokhtari et al, J Thromb Haemost 2011). Variables included rates for: high bleeding risk (mechanical versus pharmacoprophylaxis); major bleeding episode (MBE) secondary to pharmacoprophylaxis; deep vein thrombosis (DVT); pulmonary embolism (PE); and 12-month DVT/PE readmission following such discharge diagnosis. Costs considered were: thromboprophylaxis; management of MBE, DVT, PE; and 12-month DVT/PE readmission. **RESULTS:** Scenario (1): total costs for partial and complete prophylaxis were SAR631,462,830 and SAR508,957,517 for a complete-over-partial cost-avoidance by 24.1% of SAR122,505,313/year (SAR92.14 per patient and SAR167.83 per patient at VTE risk). Scenario (2): total costs for partial and complete prophylaxis were SAR712,441,824 and SAR600,483,584 for a complete-over-partial cost-avoidance by 18.6% of SAR111,958,239/year (SAR77.35 per patient and SAR127.58 per patient at VTE risk). Scenario (3): total costs for partial and complete prophylaxis were SAR749,939,936 and SAR647,300,590 for a complete-over-partial cost-avoidance by 15.9% of SAR102,639,346/year (SAR62.77 per patient and SAR97.84 per patient at VTE risk). **CONCLUSIONS:** In this population-based cost-efficiency simulation for Saudi Arabia, thromboprophylaxis of all admitted M2VH-VTE risk versus partial methods is associated with significant cost savings per year. Considering the associated reductions in DVT, PE, and readmissions, even under increased pharmacoprophylaxis-related MBE risk and costs, complete thromboprophylaxis of (M2VH) -VTE risk patients achieves the Institute for Healthcare Improvement Triple Aim of better care, better patient outcomes, and reduced costs.

## PSY69

## COST MINIMIZATION ANALYSIS OF ACTIVATED PROTHROMBIN COMPLEX CONCENTRATE (APCC) COMPARED TO RECOMBINANT FACTOR VIIA (rFVIIA) FOR HEMOPHILIA PATIENTS WITH INHIBITORS

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**OBJECTIVES:** Approximately 15-35% of patients with hemophilia A develop inhibitory antibodies to factor VIII. There are currently two bypassing agents to treat inhibitor patients in the case of bleeding episodes (BE) and preemptively before and during major surgeries. Both APCC and rFVIIa demonstrated similar efficacy and safety results. Our aim was to compare the costs of bypass strategy based on APCC or rFVIIa while we included only drug acquisition costs, and from them we derived costs of bleeding episodes and surgery costs in Hungary, Slovakia, Slovenia and Serbia. **METHODS:** For the purpose of cost comparison, we developed a model using cost-minimization approach which included only the costs of APCC or rFVIIa. We assessed the cost differences for two basic scenarios - patients with bleeding episodes and patients undergoing major surgeries. The doses used in model were: i) BE APCC 62.5 U/kg, ii) surgery APCC 85 U/kg, iii) BE and surgery rFVIIa 90 µg/kg. The doses are based on the SmPCs (middle of given dose intervals) and published literature (in the case of APCC used in surgery which is administered in higher doses in clinical practice compared to declaration in SmPC). **RESULTS:** In the scenario of bleeding episodes, the use of APCC instead of rFVIIa brings the potential savings €4,596-8,704; €5,135-9,347; €5,738-10,807; €4,369-8,527 respectively in Hungary, Slovakia, Slovenia and Serbia (depending on the dosing scheme). While using APCC during major surgeries, the savings are equal to €157,159 (if compared to rFVIIa therapy) and €15,616 (if compared to the combination therapy of APCC and rFVIIa) in Hungary; €180,653 and €16,558 in Slovakia; €196,965 and €19,362 in Slovenia; and €145,979 and €15,422 in Serbia. **CONCLUSIONS:** The potential savings by using APCC instead of rFVIIa are significant for health care systems, APCC thus indirectly enables more treated patients for the same health care costs consumption.

## PSY70

## COST-MINIMIZATION ANALYSIS OF METHADONA OPIOID ANALGESIC FOR MEXICAN PATIENTS WITH ACUTE AND CHRONIC SECONDARY CANCER AS ROTATION OPTION IN SEVERE PAIN

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**OBJECTIVES:** Perform a full economic evaluation of cost minimization of the use of Methadone versus oxycodone (extended release), buprenorphine (transdermal patches), fentanyl (transdermal patches) and hydromorphone in opioid rotation for patients with acute severe pain secondary to cancer and chronic type as rotation option in Mexico, from the point of view of public health. **METHODS:** A systematic literature review was conducted to identify articles and extract data of safety and efficacy and compare the available alternatives: methadone, oxycodone, buprenorphine (PT), fentanyl (PT) and hydromorphone. Based on the results of this systematic review was identified that 5 alternatives presented safety and efficacy profiles without significant differences. Economic evaluation corresponded to a cost minimization, the analysis was performed with three subgroups with rotation of opioids, each subgroup received a certain amount of morphine (80mg, 160mg,