A pharmacoeconomic model of administering actovegin in female patients with chronic venous disease of lower extremities was developed on the basis of clinical data (Uchkin IG et al.). Three strategies of complex therapy were considered in three groups of 100 patients each: 1st group — standard management, 2nd group — standard management + local actovegin, 3rd group — standard management + both intravenous and local actovegin. Criteria of efficiency were defined as removal of heavy legs syndrome and wound healing. Costs of drug administration, hospitalization and lab tests were under consideration. The time horizon equalled 1 month. **RESULTS:** We determined costs of patient management for each of the groups. The costs constituted 8 732 092,50 RUB in the 1st group, 8 543 937,88 RUB in the 2nd group, and 8 860 710,75 RUB in the 3rd group, so they did not vary considerably. The cost effectiveness for the removal of heavy legs syndrome in the standard therapy group was equal to 14 895,97, while it constituted 10 744,87 and 11 826,97 in the second and third groups, respectively. CER values considering the number of patients with wound healing were 39 482,20 for the 1st group, and 26 889,65 and 15 689,74 for the 2nd and 3rd groups, respectively. **CONCLUSIONS:** Actovegin in complex therapy of complicated chronic venous disease of lower extremities is substantiated from the pharmacoeconomic standpoint of cost effectiveness ratio.

PCV110

CLINICAL AND ECONOMIC ANALYSIS OF EFFECTIVENESS OF FONDAPARINUX SODIUM IN THE TREATMENT OF ACUTE CORONARY SYNDROME

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OBJECTIVES: Acute coronary syndrome is a "vehicle diagnosis", the ambulance service and involves unstable angina, myocardial infarction, including – without segment elevation of ST segment. Aim of this study was to conduct clinical and economic analysis of application of fondaparinux sodium and enoxaparin sodium in the treatment of acute coronary syndrome. **METHODS:** The method of modeling with decision-tree model and "cost-effectiveness" ratio were used. Endpoints were: mortality, the onset of myocardial infarction in the 9th, 30th and 180th day from the start of the study regarding the side effects in patients with acute coronary syndrome based on the results of clinical trials OASIS-5. Calculating the cost of drugs and medical services was conducted according to experts and standard of medical care. **RESULTS:** The cost of treatment of a single patient with acute coronary syndrome with fondaparinux sodium were lower compared with enoxaparin sodium to 9th, 30th and 180th day of treatment at 38 €, 42 € and 36 €, respectively. The cost-effectiveness ratio on the criterion of "the likelihood of myocardial infarction" for fondaparinux and enoxaparin on the 9th day of treatment was 5210 € and 6641 €, on the 30th day - 4084 € and 4810 €, on the 180th day - 3396 € and 3939 €, respectively. The cost-effectiveness ratio on the criterion "probability of death" for fondaparinux and enoxaparin on the 9th day of treatment was 7525 € and 9088 €, on the 30th day - 5351 € and 5635 €, on the 180th day - 3839 € and 4171 €, respectively. **CONCLUSIONS:** The use of fondaparinux sodium is the dominant technology in myocardial infarction without lifting ST segment, other direct anticoagulants are assigned only in case of its absence.

PCV111

THE COST-EFFECTIVENESS OF BARIATRIC SURGERY IN GERMANY

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OBJECTIVES: Patients eligible for bariatric surgery in Germany often do not receive this treatment, and sometimes receive no medical care for their obesity at all as the conventional care (CC) of behaviour/activity programmes are not reimbursed by the sickness funds. **METHODS:** We developed a Markov model to estimate the long-term (20 year) outcomes and costs for patients who receive bariatric surgery (gastric bypass or sleeve gastrectomy), CC, or no care (NC), from a German healthcare perspective. Body mass index (BMI) change, type II diabetes mellitus (T2DM), stroke, myocardial infarction and cancer were all included; inputs for these were taken from recent network meta-analyses. Utilities and costs were sourced from the literature and the German DRG tariff. It was assumed that NC patients had no obesity care costs and remained at baseline BMI, blood pressure and cholesterol level. The populations considered were patients with BMI≥40 or BMI≥35 with obesity-related comorbidities, and the subpopulation of T2DM patients. Costs and outcomes were discounted at 3% yearly. **RESULTS:** Compared to those receiving CC and NC, patients undergoing bariatric surgery were found to live longer and have fewer cases of stroke (-11 and -9 cases per 1000 patients, respectively), myocardial infarction (-35 and -41 cases per 1000 patients, respectively) and cancer (-17 cases per 1000 patients for both). The difference between bariatric surgery patients and CC or NC was even greater in patients with T2DM. Bariatric surgery was found to have an ICER of €361 per QALY versus CC (incremental cost €921, QALY gain 2.55) and of €812 per QALY versus NC (incremental cost €2055, QALY gain 2.53). Bariatric surgery was associated with an ICER of less than €10,000/QALY in 100% of simulations versus both CC and NC. **CONCLUSIONS:** Bariatric surgery improves patient outcomes and is cost-effective in Germany compared to conventional or no care.

PCV112

COST-EFFECTIVENESS OF THE NON-VITAMIN K ANTAGONIST ORAL ANTICOAGULANTS FOR ATRIAL FIBRILLATION IN PORTUGAL

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OBJECTIVES: Recently, three novel non-vitamin K antagonist oral anticoagulants (NOACs) got reimbursed in Portugal for patients with non-valvular atrial fibrillation (AF). It is therefore relevant to evaluate NOACs relative cost-effectiveness in Portuguese AF patients. **METHODS:** A Markov model was used to analyze the disease progression over a lifetime horizon. Relative efficacy data for stroke (ischemic and hemorrhagic), bleeding (intracranial, other major bleeds and clinically relevant non-major bleeds), myocardial infarction and treatment discontinuation were used by means of pairwise indirect treatment comparisons between apixaban, dabigatran and rivaroxaban using warfarin as a common comparator. Resource use was obtained from Diagnosis Related Group legislation data base and an expert panel. Model outputs included life years gained, quality-adjusted life years (QALYs), direct healthcare costs and incremental cost-effectiveness ratios (ICERs). **RESULTS:** Apixaban provided the highest life years gained and QALYs. The apixaban ICER versus warfarin and dabigatran was 5,529€/QALY and 9,163€/QALY, respectively. Apixaban was dominant versus rivaroxaban (higher health gains and lower costs). Results were robust over a wide range of inputs in sensitivity analyses. Apixaban had a 70% chance of being cost-effective (at a threshold of 20,000€/QALY) versus the set of all other therapeutic options. **CONCLUSIONS:** Apixaban is a cost-effective alternative to warfarin and dabigatran and is dominant versus rivaroxaban in AF patients from a Portuguese national healthcare system perspective. These conclusions are based on indirect treatment comparisons. Despite this limitation, this information is relevant for different health care decision makers.

PCV113

DABIGATRAN FOR THE TREATMENT AND SECONDARY PREVENTION OF VENOUS THROMBOEMBOLISM

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OBJECTIVES: Dabigatran was proven to have similar effect on the recurrence of venous thromboembolism (VTE) and a lower risk of bleeding compared to vitamin K antagonists (VKAs). This study aims to assess the cost-effectiveness (CE) of dabigatran for the treatment and secondary prevention in high risk patients of VTE compared to VKAs in the Dutch setting. **METHODS:** Previously published Markov model was modified and updated to assess the CE of dabigatran and VKAs for the treatment and secondary prevention in high risk patients of VTE from a societal perspective in the base-case analysis. The model was populated with efficacy and safety data from major dabigatran trials (i.e. RE-COVER, RECOVER II, RE-MEDY and RE-SONATE), Dutch specific costs, and utilities derived from dabigatran trials or other published literature. Univariate, probabilistic sensitivity and a number of scenario analyses on the impact of various decision-analytic settings (e.g. the perspective of analysis, use of anticoagulants only for treatment or only for secondary prevention) were tested on the incremental cost-effectiveness ratio (ICER). **RESULTS:** In the base-case, patients on dabigatran gained an additional 0.583 discounted quality adjusted life years (QALYs) over a lifetime and savings of €1,996. Results of univariate sensitivity analysis were quite robust. The probability that dabigatran is cost-effective at a willingness-to-pay threshold of €20,000/QALY was 100%. Except for the scenario comparing dabigatran to VKAs from the healthcare provider perspective and the one comparing dabigatran to placebo for the prevention of recurrent VTE in patients who are at equipoise for anticoagulation treatment where the ICERs for dabigatran compared to VKAs of €1,005 and €33,305 per QALY gained, respectively were estimated, other scenarios showed dabigatran was cost-saving. **CONCLUSIONS:** From a societal perspective, dabigatran is likely to be a cost-effective or even cost-saving strategy for treatment and secondary prevention of VTE compared to VKAs in the Netherlands.

PCV114

A POLYPILL INTERVENTION TO IMPROVE ADHERENCE FOR SECONDARY CARDIOVASCULAR DISEASE PREVENTION IN SPAIN: A COST-EFFECTIVENESS STUDY

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OBJECTIVES: To estimate the health benefits and cost-effectiveness of a polypill intervention (100mg aspirin, 20mg atorvastatin and 10mg ramipril) for the secondary prevention of cardiovascular (CV) events in adults with a history of myocardial infarction (MI) from the perspective of the Spanish health system compared with multiple monotherapy. **METHODS:** A Markov model was developed to estimate health outcomes, costs and incremental cost-effectiveness ratio (ICER) per LY gained and per QALY gained using a 10-year time horizon. The patient population included were men and women with an average age of 64.7 years, a history of MI and an indication for secondary prevention treatment. Patients in the model have a 3-month probability cycle to have one of the following five CV events: acute coronary syndrome, non-fatal stroke, non-fatal congestive heart failure requiring hospitalization, unplanned revascularization procedures, or (non-)CV death. Model inputs on efficacy, utility and adherence were obtained from systematic reviews. Different scenarios were modelled using different sources for acute event costs and alternative prices for polypill and its monocomponents. Probabilistic analyses were performed to test the robustness of the results. **RESULTS:** Polypill showed to prevent 45 CV fatal and non-fatal events per 1,000 patients in Spain in the base case. Total LYs and QALYs gained were 38 and 36 respectively, showing polypill was the dominant strategy. Probabilistic sensitivity analyses for the base-case assumptions showed a 90.1% chance of the polypill being cost-effective at a willingness-to-pay threshold of €30,000 per QALY gained compared with multiple monotherapy. Alternative scenario analyses showed that the polypill resulted to be dominant or cost-effective in all scenarios. **CONCLUSIONS:** The polypill intervention appears to be the dominant or cost-effective strategy versus its monocomponents taken separately, showing it can prevent fatal and non-fatal CV events in the Spanish population as well as to reduce healthcare costs.