Abstracts

**PCV9**

**PROPHYLAXIS AGAINST DEEP-VEIN THROMBOSIS AND FATAL PULMONARY EMBOLISM IN KNEE ARTHROPLASTIES: A COST-EFFECTIVENESS STUDY**

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**OBJECTIVE:** This study seeks to determine the costs and effectiveness of warfarin, ardeparin, enoxaparin, and no-prophylaxis for patients undergoing knee arthroplasty.

**METHODS:** A decision-analytic model was developed using TreeAge software to compare the three treatment strategies and a no-prophylaxis option. The effectiveness measure was deaths prevented for a simulated cohort of 10,000 patients undergoing knee arthroplasty. Costs were valued in U.S. dollars using a payer’s perspective and costs and probabilities of events were obtained from the published literature. **RESULTS:** All three treatment strategies were cost saving and more effective than the no prophylaxis option. Enoxaparin had the lowest expected cost of $3,242 per patient and prevented 198 deaths for the cohort of 10,000 persons. Warfarin was dominated by enoxaparin and ardeparin was the most effective option and had a marginal cost-effectiveness ratio of $207,342 per death avoided. Results of the sensitivity analysis will be presented. **CONCLUSION:** All three treatments are cost saving and more effective than no prophylaxis indicating that prophylaxis is preferred to the do nothing strategy. Warfarin was dominated by enoxaparin and should not be considered a first line anticoagulant to prevent DVT in this patient population. Ardeparin was the most effective option that had a marginal cost-effectiveness ratio above many societal willingness to pay thresholds and may not be considered a desirable use of health care resources. The robustness of these findings will be explored using sensitivity analysis.

**PCV10**

**RETROSPECTIVE MEDICAL RECORD REVIEW TO DETERMINE THE “AT GOAL” PATIENTS WITH HYPERTENSION AND/OR DYSLIPIDEMIA**

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**OBJECTIVE:** This study sought to determine the correlates of in-hospital costs for patients undergoing open-heart surgery at the 962 bed University Hospital in Zurich.

**METHODS:** We performed a retrospective analysis of all heart surgery patients referred to University Hospital who were covered by a fixed fee (29 500 SFr) arrangement in 1998, except those who had heart transplantation. We analyzed the prospectively evaluated preoperative (age, BMI, clinical characteristics, preoperative scores, history of previous heart surgery), intraoperative (operation time, anesthesia time, extracorporal circulation time, intubation hours) respectively postoperative (APACHE II, SAPS II Scores, infection, rethoracotomy) factors. **RESULTS:** In total 242 patients were hospitalized in 1998 under this fixed fee arrangement. The treatment of 69 patients (29%) caused costs higher than 40 000 SFr. Median cost per pa-
tient was 33 000 SFr (interquartile range 27211–43476). Median age of the patients was 63 years (interquartile range 55–70). We found that the following preoperative characteristics were significantly associated with cost: age (P < 0.001), preoperative cardiac diagnosis (P < 0.001), preoperative risk scores (P < 0.0001). The bivariate analysis showed a highly significant correlation between intra- and postoperative variables. The model predicted hospital costs (Y) for patients based on EuroSCORE (X1), operation time (X2), intubation time (X3) and postoperative infection (X4). Median length of stay was 10 days (interquartile range 8–12) in the general ward and 1 day (interquartile range 1–3) in the intensive care unit. CONCLUSIONS: Hospital costs are closely related to the pre- operative risk scores, intraoperative variables and occurrence of postoperative complications, which means that this model can prospectively identify patients at the first postoperative day, who are at risk for excess of costs.

PCV12
A COST COMPARISON STUDY OF AMLODIPINE AND ENALAPRIL IN THE TREATMENT OF HYPERTENSION IN EUROPE
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OBJECTIVES: To compare the treatment costs of amlodipine versus enalapril in the treatment of mild to moderate hypertension in France, Italy, Germany, Spain and Sweden. METHODS: A post-hoc analysis was performed by examining the patient-level data from a one year, double blind clinical trial of amlodipine (n = 231) versus enalapril (n = 230). We determined the frequency and dosage of antihypertensives administered longitudinally in both treatment arms. The analysis also compared the adverse event profiles and efficacy rates in each treatment group. Ex-factory costs of amlodipine, enalapril, and the diuretic, hydrochlorothiazide (HCTZ), were obtained for all countries. The net costs of treatment were calculated within trial phases and throughout the 50-week trial period. RESULTS: In all the countries evaluated, the average treatment costs in the amlodipine group were less expensive than those in the enalapril group producing a cost savings over the trial duration ranging from 2% ($2.81) in Spain to 32% ($81) in France. The mean final visit drug dosages per patient were 7.2 mg/day for amlodipine and 28 mg/day for enalapril. The total reduction in sitting DBP was not significantly different between treatment groups; however, significantly more patients (P < 0.05) in the enalapril group (n = 46, 20%) required the use of HCTZ to attain control of DBP than in the amlodipine group (n = 27, 11.7%). Finally, there were no significant differences (P < 0.05) in adverse events between groups. CONCLUSION: Healthcare providers should favor utilization of amlodipine over enalapril as a less expensive and equally effective means of achieving blood pressure control in the mild to moderate hypertensive populations of Europe.

PCV13
COSTS ASSOCIATED WITH HEALTH SERVICES UTILIZATION IN PATIENTS WITH VARICOSE VEINS
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OBJECTIVE: To assess direct medical costs in patients with varicose veins (VV) and the association between VV and costs in patients with venous disorders. METHODS: 416 patients included in the VEINES cohort study in Belgium were followed for a mean of 11.34 months, with health service utilization measured three times from physicians and patients. Items measured included consultations to physicians and health professionals, diagnostic tests, drugs, compression material and interventions (sclerotherapy, surgery, wound care, physiotherapy). Total costs (T) and costs for patients (P) were valued. RESULTS: Age and gender-standardized one-year adjusted mean costs for all patients with VV were US$311.24 (T) and $107.36 (P). Interventions represented 46.2% of T costs and 14.5% of P costs, whereas drug costs represented 17.1% and 22.6% respectively. In patients without VV (only symptoms or telangiectasia), T and P costs were US$134.72 and $75.67. Costs in patients with VV alone were US$304.9 (T) and $81.8 (P). Patients with VV and ulcer had the lowest costs (T: 189.1, P: 111.2) due to the small number of surgical interventions. In semilog covariance model adjusted for other venous disorders and determinants of health service utilization in all patients with venous disorders, a cost ratio (CR) of 2.32 (95% CI: 1.25 to 4.30) was observed for patients with VV vs. without VV. Other main cost determinant was baseline measure of disease-specific quality of life (VEINES-QOL) with inverse relationship (CR for highest vs. lowest QoL scores: 0.14, 95% CI: 0.07–0.27). CONCLUSIONS: Costsly interventions (e.g. surgery) are predominantly used by patients with VV alone for cosmetic reason, and with VV and ulcer changes possibly for ulcer prevention. Disease-specific QoL (VEINES-QOL) could be an important outcome in baseline evaluation of clinical and pharmacoeconomic studies on VV, as it was associated with level of health services utilization over 12 months.