Abstracts

PCV51

ECONOMIC EVALUATION OF DIAGNOSTIC STRATEGIES IN PATIENTS WITH SUSPECTED CORONARY ARTERY DISEASE (CAD) IN THE UK
Ratcliffe A1, Barwell T1, Chambers MG2
1Abacus International, BICESTER, OXON, UK, 2GE Healthcare, Buckinghamshire, UK

OBJECTIVE: The early identification of coronary artery disease CAD is important in preventing subsequent premature mortality and disability, and potentially reducing the health care burden associated with advanced disease. The objective of this study was to evaluate the cost-effectiveness of myocardial perfusion scintigraphy (MPS) for patients with suspected chronic CAD in the UK.

METHOD: A decision-analytic model was developed to represent the diagnosis and management of patients with suspected XCAD. A “diagnostic” module represented alternative diagnostic strategies based on combinations of exercise ECG (ExECG), MPS and coronary angiography (CA). A “treatment” module represented initial patient management, based on diagnostic results. Finally, subsequent patient experience (mortality, future MIs and revascularisation procedures) according to severity of disease and therapy at outset was represented as a Markov process. Event risks, therapy effectiveness (risk reductions), diagnostic accuracy and risks were obtained from published studies. Test and intervention costs were based on NHS reference values. Long-term costs of patient management for patients with CAD in the UK, and health state utilities were based on published values. The model was used to test parameter assumptions, including duration of therapy effectiveness (base case: 5–10 years) and delay to diagnosis of false negatives (those missed in initial work-up: base case 1 year).

RESULTS: Compared with ExECG, MPS was cost-effective when the underlying risk of CAD was <50% (cost saving at <30%). Compared with a strategy of no testing MPS was cost-effective at an underlying risk of >20%. At ≥80% risk direct CA was cost saving and more effective than alternative diagnostic strategies. Adding MPS as a second-line test for patients positive or indeterminate on ExECG was cost-effective for intermediate risk patients. CONCLUSION: MPS is likely to be an economically attractive first-line or second-line test in the diagnostic work-up of symptomatic patients with intermediate risk of chronic CAD.

PCV52

LOSARTAN-BASED VERSUS ATENOLOL-BASED THERAPY IN PATIENTS WITH HYPERTENSION AND LEFT VENTRICULAR HYPERTROPHY: AN ECONOMIC EVALUATION OF THE LOSARTAN INTERVENTION FOR ENDPOINT REDUCTION IN HYPERTENSION (LIFE) STUDY FOR GERMANY
Ratcliffe A1, Barwell T1, Chambers MG2
1Abacus International, BICESTER, OXON, UK, 2GE Healthcare, Buckinghamshire, UK

OBJECTIVE: The Losartan Intervention For Endpoint Reduction in Hypertension study (LIFE) was a double-masked, randomized trial of losartan versus atenolol in 9193 patients with essential hypertension and left ventricular hypertrophy ascertained by electrocardiography. Losartan reduced the primary composite end point of cardiovascular death, myocardial infarction, or stroke by 13% (p = 0.021) and reduced the risk of stroke by 25% (p = 0.001), despite a comparable degree of blood pressure control. We aimed to evaluate the cost-effectiveness of losartan compared with atenolol in LIFE from a German health care payer perspective.

METHODS: Discounted life expectancy with stroke, study medication use and quality of life by stroke status were estimated directly from the LIFE trial. The trial data were supplemented with data from Germany on discounted direct lifetime costs of stroke (€643,129) and discounted life expectancy in individuals without stroke. Quality-adjusted life years were estimated by weighting life years by health-related quality of life as measured by visual analogue scale data collected in the LIFE trial.

RESULTS: The lower cumulative incidence of stroke for losartan at 5.5 years (4.9%) as compared with atenolol (6.5%) (p = 0.003) was estimated to reduce stroke-related direct costs by €691 per patient and thus to offset 52% of the incremental medication cost in patients receiving losartan. The cost per quality-adjusted life year gained was €23,630 (95% CI: −1276 to 95,115) for losartan-based versus atenolol-based treatment. CONCLUSION: The clinical benefit of losartan in Germany is achieved at a cost well within accepted thresholds for cost-effectiveness. A substantial proportion of the incremental cost for losartan is offset due to strokes prevented.

PCV53

COST-UTILITY ANALYSIS OF EPROSARTAN COMPARED TO ENALAPRIL AND RAMIPRIL IN THE TREATMENT OF MODERATE TO SEVERE HYPERTENSION IN SWEDEN
Lindgren P1, Schwander B2, Zöllner Y1, Jonsson B1
1Stockholm Health Economics, Stockholm, Sweden, 2Analytica International, Loerrach, Germany

OBJECTIVES: To assess the cost-utility of Eprosartan (Teveten) compared to the two most commonly used ACE-inhibitors in Sweden.

METHODS: Cost-effectiveness from the societal and health-care payer perspective was evaluated using Monte Carlo-simulation within a Markov framework. The risk of cardiovascular and cerebrovascular events was based on the Framingham study. Costs (2005 Swedish Kronor, SEK, 1€ = 9.22 SEK) and utilities were based on published sources.

RESULTS: The incremental cost-effectiveness ratios all fall below the commonly used threshold value of 500,000 SEK per QALY, even if costs in added years of life are included which corresponds to a 5-year risk of 4.4% to 41.7%). The corresponding figures compared to Ramipril was 143,857 SEK/QALY—10,263 SEK/QALY for 80-year olds with diabetes (corresponding to a 5-year risk of 4.4%) to 691 per patient and thus to offset 52% of the incremental medication cost in patients receiving losartan. The cost per quality-adjusted life year gained was €23,630 (95% CI: −1276 to 95,115) for losartan-based versus atenolol-based treatment. CONCLUSION: The clinical benefit of losartan in Germany is achieved at a cost well within accepted thresholds for cost-effectiveness. A substantial proportion of the incremental cost for losartan is offset due to strokes prevented.

PCV54

COST-EFFECTIVENESS ANALYSIS OF DIAGNOSTIC METHODS IN THE MANAGEMENT OF PATIENTS WITH SYMPTOMATIC, LOWER LIMB PERIPHERAL ARTERIAL DISEASE
Aguiar-Ibáñez R1, Craig D1, Collins R1, Cranny G1, Burch J1, Wright K1, Berry E1, Gough M1, Kleijnen J1, Westwood M1
1Centre for Reviews and Dissemination, York, UK, 2EB Imagistics Ltd, Leeds, UK, 3Leeds General Infirmary, Leeds, UK, 4Kleijnen Systematic Reviews Ltd, York, UK

OBJECTIVES: To assess the utility of diagnostic methods in the management of patients with symptomatic, lower limb peripheral arterial disease.

METHODS: A systematic review of diagnostic methods for lower limb PAD was conducted. Evidence was synthesized using a cost-effectiveness model. The risk of cardiovascular events was based on the Framingham study. Costs and utilities were based on published sources.

RESULTS: The incremental cost-effectiveness ratios all fall below the commonly used threshold value of 500,000 SEK per QALY, even if costs in added years of life are included which gives higher ratios for treatments that extend life in older age groups. Eprosartan thus appears to be a cost-effective strategy compared to Enalapril or Ramipril.