OBJECTIVES: Contrast-induced adverse drug reactions (ADRs), including contrast-induced nephropathy (renal insufficiency and diabetes), are common among high-risk patients (e.g., patients with diabetes mellitus and renal impairment). These ADRs cause extended hospital stays and additional medication use which lead to increased costs. We examine the cost-effectiveness of the use of 2 contrast media in patients at high risk for contrast-induced nephropathy. METHODS: A decision-analytic model was constructed to estimate the cost-effectiveness of an isosmolar contrast agent, iodixanol, compared to a low-osmolar contrast medium, iohexol, in the UK. Particular emphasis of the model was to avert the incidence of severe ADRs in patients at risk of contrast-induced nephropathy. The analysis is based on a European multi-centre randomised controlled trial, the NEPHRIC trial, of patients receiving iodixanol versus iohexol in which a statistically significant reduction in the incidence of severe ADRs in favour of iodixanol occurred. Patients in the study were adults 18 years of age or older referred for coronary angiography, had diabetes and stable serum creatinine concentrations (men: 1.5 to 3.5 mg/dL; women: 1.3 to 3.5 mg/dL). ADRs considered included acute renal failure, arrhythmia, cardiovascular events, pulmonary edema, and multiple-organ failure. Resource use, including hospital days, medical visits, contrast medium, medications, laboratory tests and hospital procedures, were obtained from the NEPHRIC clinical trial. Unit costs data were obtained from standard UK costing sources. Costs are reported in 2006 £. RESULTS: Iodixanol is cost-effective compared to iohexol with both lower costs and better effects related to fewer ADRs. The mean per patient cost difference was £555.98 (±0.41 and ±56,390 for iodixanol and iohexol, respectively). CONCLUSION: Iodixanol results in fewer ADRs and lower ADR costs per patient for this high risk patient population.

OBJECTIVES: Cardiovascular (CV) risk and diseases represent a significant public health problem in Hungary. Rimonabant is the first in a new class of drugs called CB1-receptor-antagonists that improves multiple cardiometabolic risk factors such as waist circumference, HbA1c, HDL and TG in overweight/obese patients. The objective of our study is to assess the cost-effectiveness of rimonabant in the management of obese, or overweight patients with associated risk factor(s), such as type 2 diabetes or dyslipidemia in Hungary. METHODS: A Markov model was developed to assess the cost-effectiveness of rimonabant. Clinical outcomes were derived from RIO-Diabetes study and published equations were used to calculate the cardiovascular risks associated with obesity, and to determine the development of diabetes. Utilities applied in the model were primarily derived from the HODaR database. Hungarian direct costs at 2005 price level were calculated from database and questionnaires, using patient level resource use and cost data. The analysis was performed from the payer’s perspective. The costs and outcomes were discounted at 5%/year. Deterministic and probabilistic sensitivity analyses were performed. RESULTS: Adding rimonabant to diet and exercise for 1 year is estimated to gain 56 QALYs for 1000 patients over lifetime. The savings resulting from CV events avoided could partly offset the cost of rimonabant, resulting incrementnal cost of £688 (169,132 HUF) per patient. One QALY costs £12,226 (3,004,735 HUF). Cost/QALY ratio after using RIO-Lipids in sensitivity analysis still remained acceptable in Hungary. CONCLUSION: Rimonabant, added to diet and exercise, can represent a cost-effective therapy compared to diet and exercise alone in the treatment of obese, or overweight patients with associated risk factor(s), such as type 2 diabetes or dyslipidaemia in Hungary.