**OBJECTIVES:** A recent randomized trial demonstrated that twice daily biphasic insulin aspart 30/70 (BIAsp30/70) led to significantly (p = 0.0057) better glycaemic control compared to bedtime insulin glargine in insulin-naïve type-2 diabetes patients on oral antidiabetics (HbA1c reduced by −2.79% vs. −2.36% from baseline). Patients gained more weight with BIAsp30/70 than with glargine (5.4 vs. 3.5 kg, p = 0.0013), but weight gain per unit insulin was similar. The CORE Diabetes Model, a peer-reviewed, validated, model was used to project the long term cost effectiveness of BIAsp30/70 versus glargine. **METHODS:** The CORE Diabetes model employs standard Markov/Monte Carlo simulation techniques to describe the long-term incidence and progression of diabetes-related complications. Transition probabilities were derived from major diabetes studies. Clinical effects of comparators were derived from the INITIATE study. The analysis was performed using published country-specific costs, health care resource utilization and clinical data, and recommended discount rates. A lifetime horizon and payers' perspective was taken. Only direct costs were considered. Sensitivity analyses were performed. **RESULTS:** Discounted quality-adjusted life years (QALY) were improved by 0.13–0.25 years with BIAsp30/70 versus glargine depending on country-specific discount rates. Lifetime cost savings were observed with BIAsp30/70 in the Danish, Dutch, Finnish, French, Norwegian, Spanish, and Swedish settings. Overall costs were increased with BIAsp30/70 versus glargine in the German and UK settings, with incremental cost-effectiveness ratios of 3692€ and ≤1541/QALY gained respectively. Results were most sensitive to changes in baseline HbA1c and to the relative costs of BIAsp30/70 versus glargine. **CONCLUSIONS:** Improvements in glycemic control outweighed the greater increase in body weight, leading to improved quality-adjusted life expectancy with BIAsp30/70 versus glargine. BIAsp30/70 was projected to lead to overall cost savings or would be considered cost-effective versus glargine, with costs/QALY falling well below commonly accepted international thresholds.

**WILL IRBESARTAN LEAD TO COST SAVINGS DUE TO DELAYED END STAGE RENAL DISEASE IN HYPERTENSIVE TYPE-2 DIABETICS IN GERMANY?**

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**OBJECTIVES:** Type-2 diabetes is a major health problem. 30% of all patients being on dialysis suffer from a diabetic Endstage Renal Disease (ESRD). The Angiotensin-2-Receptor-Blocker (ARB) Irbesartan has proven its capability to prevent or delay an ESRD. Based on the results of the multicentre double-blind, randomized, placebo-controlled Irbesartan Diabetic Nephropathy Trial (IDNT) the presented study aims to show that a treatment of renal diseases in hypertensive type-2 diabetics with the ARB Irbesartan is cost saving for the German health care system. **METHODS:** A cost-effectiveness analysis from the German payers' perspective was conducted taking direct costs into account. 1715 type-2 diabetics with hypertension and limited renal function were included in IDNT (2.6 years, subgroup with 300 mg/d Irbesartan). The patient number needed to treat (NNT) to prevent one ESRD was the efficacy parameter for this analysis. Public sources were used for cost data and information on dialysis and transplantation in diabetics with ESRD. Actual drug prices were used taking into account discounts and co-payments effective in Germany due to new legislation since January 2004. Due to conservative calculation no discounting was performed, follow-up treatment costs were not included. **RESULTS:** The NNT for the primary endpoint ESRD calculated to 28 during the study period of 2.6 years in IDNT. That means additional treatment costs of €25,007.—lead to one prevented ESRD (incremental cost-effectiveness-ratio). The prevented ESRD (82% dialysis, 18% transplantation) is worth €45,766.—which shows a benefit for Irbesartan treatment of €20,758.—after 2.6 years or €7984.—per year assuming a linear trend towards delay in ESRD. A sensitivity analysis stated the robustness of the data. **CONCLUSIONS:** Based on epidemiologic data our results suggest savings for the German health care system of €3.2 billion after 2.6 years if annually additional €681 million were invested in the treatment of type-2 diabetics with Irbesartan.

**THE VALUE OF ORAL MONOTHERAPY ALTERNATIVES IN THE FIRST-LINE TREATMENT OF TYPE-2 DIABETES MELLITUS**

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**OBJECTIVES:** To construct a lifetime model evaluating potential health benefits and costs applying to Scottish Type-2 diabetes mellitus patients initiating first-line oral monotherapy, for whom metformin is inappropriate because of contra-indications or intolerance. When lifestyle modification (diet and exercise) affords inadequate glycaemic control, these patients currently have no alternative to sulphonylurea (SU) therapy. The model compared novel agent pioglitazone (PIO) versus generic SU treatment. **METHODS:** A decision-analytic Markov model was constructed using published (UKPDS) cost data for diabetes management and co-morbidity treatment. Three prospective treatment pathways were explored: first-line PIO/second-line PIO + SU combination/third-line insulin; first-line SU/second-line PIO + SU combination/third-line insulin; and first-line SU/second-line insulin. The model incorporated efficacy evidence of glycaemic control under PIO and SU, measured as initial HbA1c improvements and the rate of disease progression in terms of HbA1c (the coefficient of failure). **RESULTS:** Patients treated with PIO achieved better HbA1c control and improved serum lipid profiles, which translated into fewer diabetic complications, better quality of life and improved overall survival. Additional drug costs of PIO over SU were partly offset by lower costs to treat and manage diabetes complications, and delayed insulin therapy. The estimated incremental cost per QALY gained of PIO was £2415 compared to SU (when followed by second-line PIO/SU and third-line insulin therapy). The incremental cost per QALY gained of PIO was £1514 compared to SU (when followed by second-line insulin therapy). **CONCLUSIONS:** Clinical trial evidence indicated superior glycaemic (HbA1c) control in patients treated with PIO, in comparison with those treated with SU. The model showed that PIO is a cost-effective intervention and thus a valuable addition to first-line treatment options for patients intolerant and/or contra-indicated to metformin. Importantly, initiating PIO as second-line combination treatment after first-line SU in this patient group was less efficient than providing PIO monotherapy in a first-line setting.

**THE COST-EFFECTIVENESS OF PIOGLITAZONE IN COMBINATION WITH METFORMIN IN THE TREATMENT OF TYPE 2 DIABETES MELLITUS IN SCOTLAND**

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**OBJECTIVES:** To develop a lifetime model of Type-2 diabetes mellitus and its sequelae, to compare the costs and benefits of