NPH to insulin glargine and combining the effect of HbA1c and hypoglycaemia reduction. METHODS: A discrete event life simulation with microvascular complications incorporated via the DCCT (Diabetes Control and Complications Trial) study and cardiovascular events modelled using the Framingham equations was adapted to include the combined effects of HbA1c and hypoglycaemia reduction using published meta-regression results from 11 randomised clinical trials. Direct costs and quality of life (EQ5D) were derived from published sources and the HODaR database respectively; costs and benefits were discounted annually at 3.5%. The model was adapted to the profile of T1DM patients switched from NPH to glargine identified via the THIN database. Analysis was conducted on a total of 383 patients with data for the 12 month period prior to, and post switch; using primary outcome measure of adjusted HbA1c change. As hypoglycaemia was not directly collected from the THIN database a sensitivity analysis was performed taking into account HbA1c benefit only. RESULTS: The median age of patients switched from NPH to glargine was 34 years with mean duration of T1DM of 11.4 years. Baseline HbA1c was 8.71% and patients switching to glargine showed a reduction in HbA1c of 0.195% (p = 0.0045) between switch and 12-months post initiation. In a simulated cohort of 10,000 the discounted incremental cost effectiveness ratio (ICER) was ≤3,665 per quality adjusted life year gained (QALY). In sensitivity analysis using HbA1c benefit only the ICER was ≥9,411. CONCLUSION: Based on real life observational data, switching to glargine is cost-effective when compared to NPH; with a corresponding ICER well within accepted thresholds, even in sensitivity analysis using HbA1c effect only.

### PDB31

**TOTAL COST REDUCTION IN TYPE 2 DIABETES MELLITUS (T2DM) PATIENTS TREATED WITH PIOMITAZONE (PIO) BASED THERAPIES VERSUS NON-TZHIDARIOZINDIONE (NON-TZD) BASED THERAPIES**

**Baran BW, Xu Y, Vallarino C, Pandya B**

Takeda Global Research and Development Center, Inc, Deerfield, IL, USA

**OBJECTIVES:** An internal study showed the relative risk of stroke was 0.800 and of MI was 0.621 for PIO based therapies versus non-TZD. Reduced MI and stroke events may drive reduced health care costs. Our objective was to compare health care costs in T2DM patients treated with PIO based versus non-TZD based therapies who had no prior MI or stroke events.

**METHODS:** A retrospective cohort analysis was conducted using US health plan data (I3Innovus) from January 1, 2003 to June 30, 2006. Initial ICD-9 codes for T2DM (250.x0 and 250.x2) defined patient index date. The PIO group included patients treated with PIO combined with any other antidiabetic agents (excluding rosiglitazone). The non-TZD group included patients treated with any antidiabetic treatment, but not TZDs. Inclusion criteria were: age ≥45 years, continuous enrollment for at least 6 months before and 1 month after the index date, no history of stroke or MI in the last six months and documented medical claims after the index date. Stroke and MI were defined by appropriate ICD-9 codes. We fitted a generalized linear model with log link and gamma distribution to the monthly average cost in [1] stroke and [2] MI cohorts, controlling for age, hypertension, and hypercholesteremia. **RESULTS:** In the stroke cohort, mean total health care cost per patient per month was $1,839 in the PIO group versus $2,115 in the non-TZD group (p < 0.0001). In the MI cohort, mean total health care cost per patient per month was $1,843 in the PIO group versus $2,191 in the non-TZD group (p < 0.0001). Mean medical cost per patient per month in the stroke and MI cohorts was 20% and 23% less, respectively, in the PIO group compared to the non-TZD group.

**CONCLUSION:** PIO based therapies are associated with significantly lower medical and total health care costs compared to those not treated with TZDs in MI and stroke cohorts.

### PDB32

**EVALUATING THE LONG-TERM CLINICAL AND ECONOMIC IMPLICATIONS OF CONVERTING TYPE 2 DIABETES PATIENTS TO INSULIN DETEMIR (± ORAL HYPOGLYCEMIC AGENTS) FROM INSULIN GLARGINE BASED REGIMENS IN GERMANY; DATA FROM THE PREDICTIVE STUDY**

**Valentine WJ**, Goodall G, Agren M, Nielsen S, Kotsche R


**OBJECTIVES:** Data from the PREDICTIVE study indicated that, in type 2 diabetes patients receiving long-acting insulin therapy ± oral hypoglycemic agents (OHAs), therapy conversion from insulin glargine to insulin detemir was associated with...