significant improvements in glycemic control (HbA1c 0.59%) and body weight (BMI 0.52 kg.m-2). The aim of this analysis was to estimate the long-term clinical and cost implications associated with therapy conversion from insulin glargine to detemir in type 2 diabetes patients in Germany. **METHODS:** A previously published and validated diabetes model (CORE Diabetes Model) was used to make long-term projections of clinical and cost outcomes based on patient characteristics (age 62.3 years, duration of diabetes 7 years, HbA1c 8.30%, 50.4% male) and treatment effects from the German part of PREDICTIVE. The model was used to estimate life-expectancy, quality-adjusted life expectancy and to account direct medical costs (pharmacy, patient management and complication costs). Costs were derived from published sources and expressed in 2006 Euros. Future costs and clinical benefits were discounted at 5% annually. **RESULTS:** Therapy conversion from insulin glargine to insulin detemir was projected to improve life expectancy by approximately 0.13 years (7.08 ± 0.13 versus 6.95 ± 0.12 years) and quality-adjusted life expectancy by 0.29 quality-adjusted life years (QALYs) (4.53 ± 0.09 versus 4.24 ± 0.08 QALYs). Direct costs associated with insulin detemir treatment were projected to be lower over patient lifetimes than with glargine (€ 54,807 ± 1,788 versus € 55,839 ± 1,749 per patient, difference € 1,032). Cost savings were driven by lower complication costs (due to HbA1c improvements) associated with insulin detemir. **CONCLUSION:** Modeling the long-term implications of therapy conversion from insulin glargine to detemir based on data from German patients in PREDICTIVE indicates that insulin detemir is associated with benefits in terms of life expectancy, quality-adjusted life expectancy and complication rates, as well as reducing costs from a third-party health care payer perspective in Germany.

PDB33

COST EFFECTIVENESS OF JANUVIA VERSUS AVANDIA AS SUPPLEMENTARY TREATMENT IN COMBINATION WITH METFORMIN FOR PATIENTS WITH TYPE 2 DIABETES

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OBJECTIVES: To assess the costs and effects of Januvia versus Avandia as supplementary treatment in combination with metformin, for patients with type 2 diabetes in whom metformin (in addition to diet and exercise) does not provide adequate glycemic control. **METHODS:** The Disease Elimination Life Table Analysis (DELTA) cohort model was used to assess the costs and effects of Januvia (100 mg) in comparison to Avandia (8 mg). The model contains five sub models representing diabetes related complications. Estimates of disease progression, incidence in the sub models, disease related mortality, and all cause mortality, were derived from the UK Prospective Diabetes Study. Estimates regarding drug efficacy and adverse events were based on an 18-week head-to-head comparison of Januvia 100 mg versus Avandia 8 mg supplementary to metformin. The analysis was conducted from a societal perspective. Direct and indirect costs were included. Effects were reported as (disease-free) life years and quality-adjusted life years (QALY). To determine the robustness of the model and the impact of uncertainty, uni- and multivariate sensitivity analyses were carried out. **RESULTS:** Januvia is estimated to be the dominant treatment when compared to Avandia 8 mg. The univariate sensitivity analyses revealed this conclusion to be robust over a wide range of values. Results from the multivariate sensitivity analysis estimate the probability that Januvia combines additional effectiveness with cost savings at

59%, the probability that Januvia gains QALYs at additional costs at 13%. The probability that Januvia is less effective is estimated at 28% (15% with cost savings and in 13% with additional costs). **CONCLUSION:** Conditional on the correctness of the estimates and assumptions made, Januvia 100 mg is dominant over 8 mg Avandia. Sensitivity analyses suggest results are robust to reasonable changes in input parameters.

PDB34

LONG-TERM COST-EFFECTIVENESS ANALYSIS OF A MODERN INSULIN IN PATIENTS WITH POORLY CONTROLLED TYPE 2 DIABETES IN THE GERMAN SETTING; DATA FROM THE PREDICTIVE STUDY

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OBJECTIVES: The aim of this analysis was to project the long-term clinical and economic outcomes associated with therapy conversion to insulin detemir from Neutral Protamine Hagedorn (NPH) insulin in patients with type 2 diabetes in the German setting. **METHODS:** A previously published and validated computer simulation model of diabetes was used to make long-term projections of clinical and cost outcomes based on patient characteristics and treatment effects from a sub-analysis of the PREDICTIVE study. Data from PREDICTIVE indicated that therapy conversion from NPH insulin to insulin detemir was associated with significant improvements in glycemic control (HbA1c −0.6%) and reduced weight gain (body mass index −0.382 kg/m²). Based on these clinical findings, the computer simulation model was used to estimate life-expectancy, quality-adjusted life expectancy and costs from a third party healthcare payer perspective. Future costs and clinical benefits were discounted at 5% per annum. **RESULTS:** Conversion to insulin detemir was projected to improve life expectancy by approximately 0.13 years compared to NPH (7.08 ± 0.13 versus 6.95 ± 0.12 years) and quality-adjusted life expectancy by 0.28 quality-adjusted life years (QALYs) (4.51 ± 0.09 versus 4.23 ± 0.08 QALYs). Direct medical costs over patient lifetimes were projected to be marginally lower in patients receiving insulin detemir compared to NPH (€ 54,575 ± 1,842 versus € 54,640 ± 1,739, difference € 65 per patient). Pharmacy costs were higher with insulin detemir (€ 14,129 versus € 12,230, difference € 1,899) but were more than offset by cost savings due to complications avoided (complication costs € 38,246 versus € 40,242, difference € 1,996). **CONCLUSIONS:** This modeling study, based on a German sub-analysis of PREDICTIVE, suggests that therapy conversion from NPH to insulin detemir is likely to be associated with long-term clinical benefits and may well be cost saving in type 2 diabetes patients in the German setting.

PDB35

ECONOMIC ANALYSIS OF THE TREATMENT WITH INSULIN GLARGINE PLUS ORAL ANTIDIABETICS (BOT) COMPARED TO TWICE DAILY PREMIXED INSULIN (CT) BASED ON THE LAPTOP TRIAL

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OBJECTIVES: Based on the clinical results of the LAPTOP trial, a cost analysis from the perspective of the German Statutory Health Insurance (SHI) was performed. In addition a model simulation of the long term complications was conducted using