long-term health outcomes for patients with T2DM. Compared with exenatide, the cumulative incidence of cardiovascular diseases (CVDs) and major adverse cardiovascular events (MACE) for the 5-year real-world follow-up period was lower in the liraglutide arm than in the exenatide arm. The differences were statistically significant (hazard ratio [HR], 0.47; 95% confidence interval [CI], 0.30-0.74; P < 0.001).

Conclusion: Liraglutide 1.2 mg was associated with improvements in cardiovascular outcomes in patients with T2DM at high risk of cardiovascular events. Further studies are needed to confirm these findings and explore the mechanisms underlying the cardiovascular benefits of liraglutide.

**PDB24**

**LONG-TERM COST-EFFECTIVENESS OF BIPHASIC HUMAN INSULIN 30 IN PEOPLE WITH T2 DIABETES WITH INADEQUATE GLYCEMIC CONTROL ON ORAL ANTIADIABETIC DRUGS IN CHINA**

Hua Xu1, Deng Y2, Liu M2, Zhang SP1, Hu CY3

1Jianfeng Affiliated Central Hospital of Shandong University, Jinan, China, 2School of Nursing of Shandong University, Jinan, China, 3Affiliated Hospital of Shandong University of Traditional Chinese Medicine, Jinan, China, *The Second Hospital of Shandong University, Jinan, China

**OBJECTIVES:** To evaluate long-term cost-effectiveness of switching to biphasic human insulin 30 [bovine Protamine Bovine Synthetic Human Insulin Injection (pre-mix30)] in people with type 2 diabetes (T2DM) poorly controlled with oral anti-diabetic drugs (OAD) in China. **METHODS:** The validated IMS CORE Diabetes Model (V.5) was used to project long-term life years, quality-adjusted life years (QALYs) and costs. Two extensively-adopted agents in treatment of T2DM, metformin and acarbose, were selected as usual max-dose, and the annual-costs were ¥2,070.28. Metformin would achieve cost-savings by 22.06% to 69.90% than acarbose, by -0.38% (95% CI, -0.736 to -0.024) and -0.34% (95% CI, -0.651 to -0.029) respectively. Cost-minimization analysis was conducted on the assumption that these two agents had same hypoglycemic effects. In the first two scenarios, acarbose was assumed to titrate from 50mg/day up to 150 mg/day (weight<60kg) or 300mg/day (weight>=60kg) as usual max-dose, and the annual-costs were ¥2,070.28 and ¥3,530.84. In the last two scenarios, metformin was assumed to titrate from 500mg/day up to 1500mg/day or 2000mg/day, while the annual-costs were ¥1,568.04 and ¥2,070.28. Metformin would achieve cost-savings by 22.06% to 69.90% than acarbose, and sensitive analysis demonstrated its robustness. **CONCLUSIONS:** Findings from this study are consistent with previous studies in other countries. Metformin has significant hypoglycemic-effects and low costs in China.

**PDB25**

**ECONOMIC EVALUATION OF INSULIN ANALOGS VERSUS HUMAN INSULIN 30 IN PATIENTS WITH TYPE 2 DIABETES: A SYSTEMATIC REVIEW**

Liu Y2

China Pharmaceutical University, Nanjing, China

**OBJECTIVE:** This systematic review and economic evaluation study compared the cost-effectiveness of insulin analogues versus human insulin in people with type 2 diabetes (T2DM) in China and compared with published international literature. **METHODS:** Research literature on insulin analogue versus human insulin was searched for published literature comparing the cost-effectiveness of insulin analogues versus human insulin [NPH], by which provide evidence for relevant health decision-making and clinical practice. **METHODS:** Each literature was described with economic evaluation of insulin analogue versus human insulin in Chinese and English literature database by basic information, data sources and results of included studies were analyzed and reviewed. **RESULTS:** Twenty seven studies in 16 published papers carried out in China, USA, European, Australia and China were included in the review. The results in the studies were significantly inconsistent, which was perhaps mainly due to the different data source, model selection, time horizon and hypothesis. However, the public health institutes in Canada, UK, Germany and Australia had reported highly suspiciousness on the cost-effectiveness of insulin analogs for diabetes patients, especially for type II diabetes. **CONCLUSION:** In lack of powerful evidence, it has not reached an agreement about the cost-effectiveness of insulin analogs and human insulin for diabetes in countries like Canada, UK, Germany and Australia, the reimbursement policies on insulin analogs were recommended with cautious. As China is a developing country, diabetes patients should select appropriate regimes even more cautiously according to local health care system, personal disease characteristics and affordability. Future studies, comparing the cost-effectiveness of insulin analogs with human insulin, should be conducted with longer time horizon and be based on updated and more reliable clinical data.

**PDB26**

**PHARMACOECONOMIC EVALUATION STUDY ON PROPREOOPERATIVE TREATMENT OF ACROMEGALY WITH SOMATOSTATIN ANALOGUES IN SHANGHAI**

He J1, Hu SL2, Li YMP, Zhang Y, Zheng HP3, Zhu GL3, Jin J3

1Shanghai Health Development Research Center, Shanghai, China, 2Tiaohuan Hospital, Pudong University School of Medicine, Shanghai, China, 3Shanghai Pudong Development Bank Pharmaceutical Co., Ltd., Shanghai

**OBJECTIVES:** To carry out a pharmacoeconomic evaluation study on preoperative treatment of acromegaly patients with somatostatin analogues (lanreotide and octreotide) in Shanghai. **METHODS:** Through a retrospective clinical study with cost-minimization analysis (CMA) from the perspective of health service providers, to collect 89 acromegaly patients’ medical records in a sampling hospital from January 1, 2009 through June 30, 2013, then comparing the clinical effectiveness (the overall cure rate based on IGF-I value) returned into the range after 3 months of post-operation) and the direct medical costs including drug cost, medical consultation fees, and costs for diagnostic procedures, hospitalization, treatment costs for adverse drug reactions (ADR) and other costs arising from medical intervention among the sole surgical treatment group (35 cases), the group of preoperative treatment with lanreotide (36 cases), and the group of preoperative treatment with octreotide (18 cases).

**RESULTS:** Based on the good compatibility of tumor size, postoperative average age of 67.5 years, 567 vs. 113 patients admitted during an inpatient stay in a total direct medical cost saving of 7,626 CNY. These results indicated that lanreotide 1.2 mg was cost saving approach in comparison with exenatide. Sensitivity analysis illustrated the robustness of the results. The treatment of lanreotide 1.2 mg improved patient health and economic outcomes versus exenatide, and was a dominant treatment approach for T2DM patients in clinical practice.

**PDB27**

**COST MINIMIZATION ANALYSIS OF CLINICAL OPTION SCENARIOS FOR METFORMIN AND ACARBOSE IN TREATMENT OF TYPE 2 DIABETES: BASED ON COST-MINIMIZATION ANALYSIS**

Gao S1, Xu X1, Shi L2, Sawhney M1, Hu H1, Dong H3

1Zhejiang University School of Medicine, School of Public Health, Hangzhou, China, 2Bristol-Myers Squibb, Shanghai, China, 3Thunde University, New Orleans, LA, USA, 3Marshall University, Huntington, WV, USA

**OBJECTIVES:** Metformin is the first-line oral hypoglycemcic agent for type 2 diabetes mellitus (T2DM) per international guideline with proven efficacy, safety and cost-effectiveness. However, current evidence is inconclusive. This study aims to ascertain both the effectiveness and cost-effectiveness of these two extensively-adopted agents in treatment of T2DM. **METHODS:** Randomised Controlled Clinical Trials comparing metformin and acarbose were included in the review. Meta-analysis and Bucher-method-based indirect comparisons were conducted. **RESULTS:** liraglutide 1.2mg was associated with improvements in life expectancy by 0.655 years (13.113 vs. 12.458) and quality-adjusted life-years by 0.609QALYs (9.270 vs. 8.661) per patient. Biphasic human insulin 30 improved life expectancy by 0.80 per patient-year during the study period. Treatment costs were calculated by multiplying retail prices in China and dosage used in the trial. Management and complication costs of each patient were calculated with real-life cost data. Results of included studies were analyzed and reviewed. **CONCLUSION:** A according to the data to the direct medical costs from the sampling hospital in Shanghai, lanreotide has more cost advantage compared with octreotide.