comes from BOT (insulin glargine plus glimepiride and metformin) in comparison to a conventional therapy (CT) with pre-mixed insulin (30/70) twice daily were analysed. METHODS: The applied DMM is an epidemiological simulation model developed to predict the progression of the disease in a simulated diabetes patient population. Baseline values for the simulations: mean age of the population 60 ± 9.0 years, mean duration of diabetes 9.0 ± 7.0 years and mean HbA1c value 8.8 ± 0.9%. The response rate for BOT (HbA1c ≤ 7%) was 49% and for CT 39%. Mean HbA1c for responders were 6.46% and 6.55% respectively, whereas values for non-responders were assumed to be 7.82% and 8.09%. The responder rates in the sensitivity analyses were varied in 2%-steps, with a range between 44% and 56%. Additionally the impact of age/duration variations was analysed. RESULTS: The relative risk reduction (RRR) for micro vascular events after 10 simulation years for BOT versus CT cohort varied between 14% (ESRD) and 2% (retinopathy). The sensitivity analysis showed that also with a worst-case scenario (i.e. BOT responder-rate of 44%) the RRR for ESRD was still in the range of 10%. Patient stratification on age and duration demonstrated that the response-rates had the strongest influence on diabetes complications of kidneys and nerve system, especially in the earlier stages of diabetes. CONCLUSIONS: Better HbA1c control with BOT compared to CT is estimated to reduce long-term micro-vascular complications based on simulations with the DMM.