BACKGROUND AND OBJECTIVE: Health economic studies in patients with diabetes mellitus have demonstrated that a large proportion of the excess cost is caused by the treatment of specific complications. It was the aim of this study to analyse the distribution of per capita cost of a large cohort of diabetic patients in order to develop new strategies for a better identification and care of high-risk patients. METHODS: The analysis was based on anonymous data on patients with diabetes and an age-matched control group from a large cohort of subjects insured by a large statutory health insurance fund (AOK Hesse) (n=305736). Costs were fully assessed and related to the state of complications and other criteria. RESULTS: The average cost was 5262 euros per diabetic patient and year. Excess costs due to the diabetes were estimated at 2507 euros. Costs were unevenly distributed, depending on the presence of complications. The average excess cost of patients with at least one complication was 3730 euros (469 for patients without complication). In particular, patients on hemodialysis, after kidney transplantation or with lower leg amputation, stroke or with gangrene or foot ulcer incurred great costs. 5.3% of all diabetic patients incurred costs of > or = 20000 euros per year, totalling up to 33.6% of all costs of diabetic patients. Another 9.5% of patients incurred costs of between 10000 euros and 20000 euros per year. Both groups were responsible for 59.6% of total costs. In contrast, 55% of the
patients incurred costs of < 2500 euros per year, amounting to 11.8% of all costs. CONCLUSIONS: There is a considerable variation of cost incurred in the management of diabetic patients, as demonstrated in a large population-based cohort of diabetics. This increased cost was largely due to the presence of complications. High-risk patients should be identified as early as possible so that they can receive intensive care to avoid the expensive complications of the disease.