OBJECTIVE: To determine the long-term clinical and economic outcomes of combined ACE-inhibitor and calcium antagonist therapy (Tarka) versus standard care for preventing the development of end-stage renal disease in type 2 diabetic patients with hypertension and macro-proteinuria in the United States. METHODS: Markov process analysis techniques were used to model the health economic outcomes. Probabilities, unit costs, resource utilization data and utilities were obtained from published literature, clinical trial reports, and a national database (USRDS). Progression of renal failure was measured using the rate of proteinuria as indicator. The perspective was that of the third-party payer. RESULTS: In the 5-year analysis Tarka yielded a 0.1 gain in QALYs when it was compared to ACE-inhibitor (4.1 versus 4.0) and 0.2 gains in QALYs compared to calcium antagonist (4.1 vs. 3.9). The lifetime model yielded a gain of 0.7 QALYs when it was compared to ACE-inhibitor (7.6 vs. 6.9) and a gain of 0.8 QALYs compared to calcium antagonist (7.6 vs. 6.8). In the lifetime analysis Tarka resulted in a 0.9 year gain in life expectancy when it was compared to ACE-inhibitor (10.1 vs. 9.2) and 1 year gain in life expectancy compared to calcium antagonist (10.1 vs. 9.1). From the payer perspective Tarka was a cost saving versus ACE-inhibitors and calcium antagonists over the five years and the life-time horizon and consequently Tarka is dominant over usual care. CONCLUSION: The results showed that the favourable clinical benefit of Tarka results in positive short and long-term health economic benefits.