OBJECTIVES: The objective of this analysis is cost-effectiveness comparison of bupropion SR in the treatment of tobacco dependence versus: placebo, nicotine replacement therapy (NRT), bupropion SR used in combination with NRT (BUPR+NRT).

METHODS: The efficacy analysis was carried in accordance with guidelines for systematic review basing on credibility criteria of the Cochrane Collaboration - Cochrane Reviewers' Handbook and Evidence Based Medicine. Cost analysis included direct costs from payer's extended perspective (public resources and the patient), collected in Poland. Sensitivity analysis was performed, with consideration of the variable costs of NRT.

RESULTS: The results of metaanalyses showed a statistically significant increase of successful attempts of tobacco cessation with the use of bupropion versus placebo by 10.7% per year (ARR). Bupropion also shows a statistically significant superiority in relation to NRT. The odds ratio of one year-long abstinence with the use of bupropion versus NRT is 2.0 [CI 95% (1.2 - 3.4)]. The economic analysis has shown that the most cost-effective is bupropion used in combination with medical advice. The cost of maintaining abstinence for the lifetime as a result of the use of bupropion in combination with medical advice, calculated for one patient, is 2,948,70; cost for LYG is 1,474,35; cost for QALY is 1,092,23 (2002 average exchange rate: 1 = 3,86 PLN). The least favourable is NRT. The technology being the combination of NRT and bupropion has intermediate cost-effectiveness results. The cost of medical advice has not been considered in the analysis.

CONCLUSION: It may be stated that bupropion is a medicinal product statistically significantly more effective versus placebo and NRT in the treatment of nicotine dependence. Bupropion is a cost-effective technology, where the cost for LYG is significantly lower than the cost-effectiveness threshold (10,362,69/dialysotherapy/patient per year).