

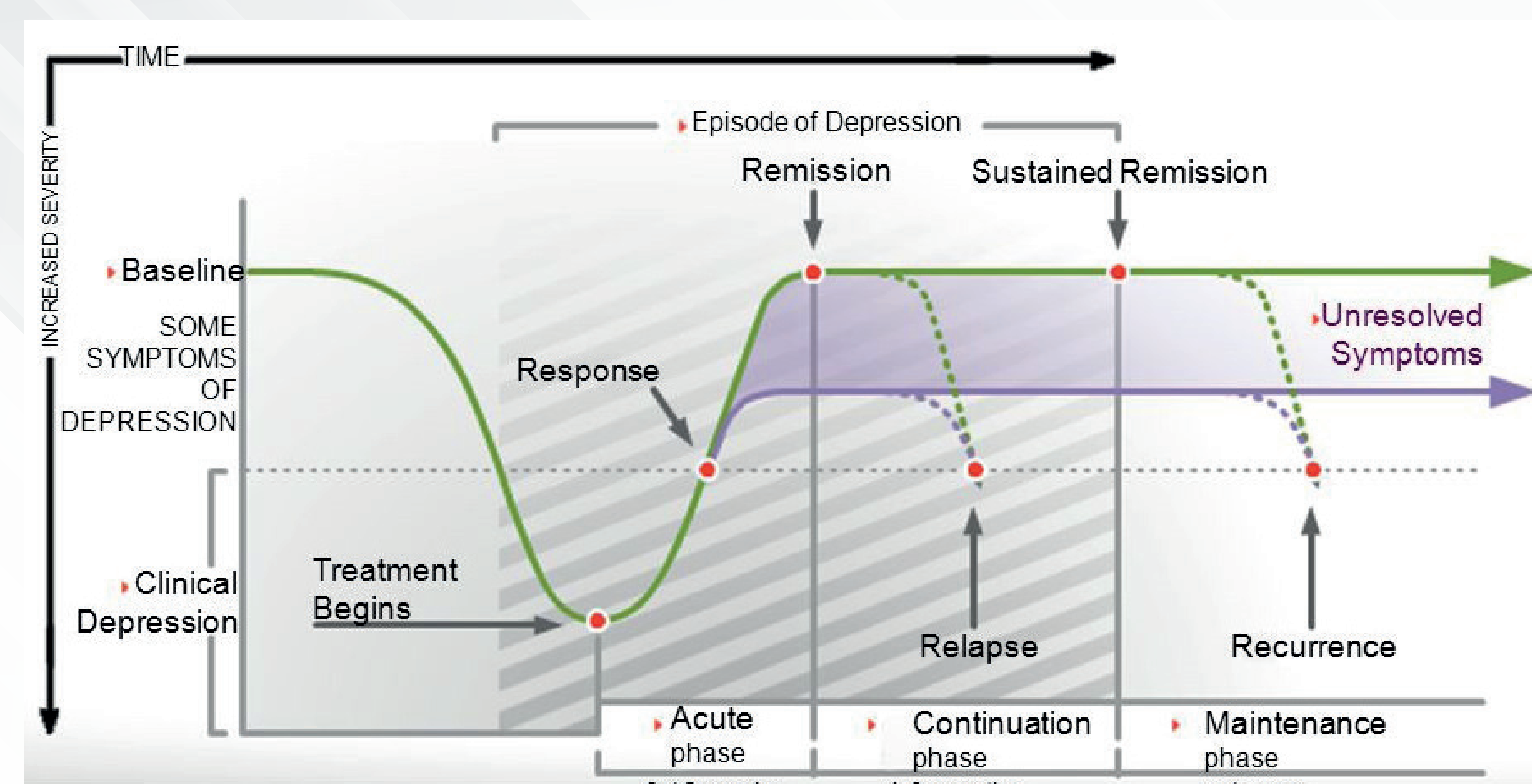
MODEL DEVELOPMENT FOR ASSESSING COST-EFFECTIVENESS AND PREPARE REIMBURSEMENT DOSSIER OF RTMS IN PATIENT POPULATION WITH TREATMENT-RESISTANT DEPRESSION IN HUNGARY



Bella R, Kovács S, Vincze G, Fittler A, Botz L, Zemplényi A
University of Pécs, Pécs, Hungary

OBJECTIVES:

Major depressive disorder (MDD) is a common mental illness as being the second leading cause of disability worldwide. Treatment-resistant depression (TRD) amounts to 45% of total MDDs, however the definition is not yet standardized. Repetitive Transcranial Magnetic Stimulation (rTMS) has a rich literature for the treatment of TRD-patients. The aim of this study was to define an appropriate model concept for the cost effectiveness analysis of rTMS intervention in the TRD subpopulation of MDD in Hungary from payer perspective, to support the reimbursement process initiated by a tertiary healthcare provider.

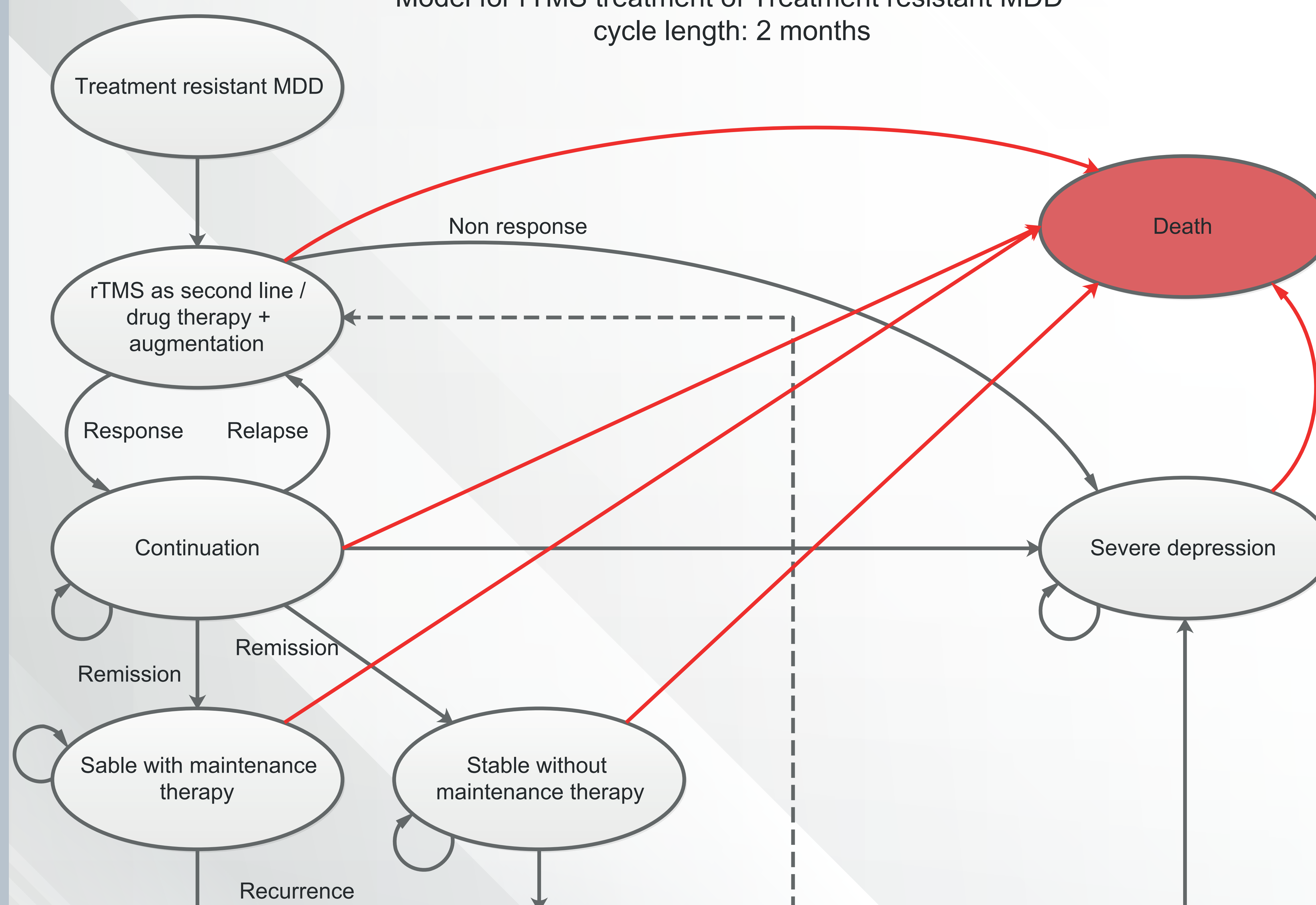


Adapted from: Kupfer DJ. J Clin Psychiatry. 1991;52 Suppl:28-34.

METHODS:

A systematic literature review was conducted and reported in compliance with the PRISMA Statement. After the screening, potentially relevant articles were analyzed in full text, and data were systematically extracted by use of explicit methodology.

Model for rTMS treatment of Treatment resistant MDD
cycle length: 2 months



RESULTS:

The search query resulted in 61 articles, which after the deduplication and title abstract screening were narrowed down to six from which information about models employed in full economic analyses of rTMS were extracted. In general, within these articles a model time equal or shorter than 1 year were applied to cover the acute phase and a short maintenance period, however no relapse was implemented due to short model time. From methodological perspective decision tree and Markov models were used to assess the effect of rTMS during the acute and maintenance phase respectively. The cost-effectiveness of rTMS was determined in a comparison to electroconvulsive therapy or to medical management.

CONCLUSION:

Based on the model structures were published in the identified articles we conceptualized a model in line with the treatment protocol of major depression disorder applied in Hungary. Patients enter the prevalence Markov model in the state of therapy resistant depression and going through an acute therapy a continuation and maintenance phase. The rTMS treatment is compared to the second line medical management plus augmentation therapy. The cycle length of the model is two months which was defined in line with the length of rTMS treatment. The suggested overall model time is 3 years, which enables to model the recurrence consistent with the natural trajectory of the disease and provides an opportunity for scenario analysis based on the hypothetical possibility of reenrollment to rTMS therapy.

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Corresponding author:
Dr. Richard Bella
University of Pécs, Faculty of Pharmacy
Pharmaceutical Institute
Department of Pharmacoeconomics
E-mail: bella.richard@pte.hu

