Introduction: The effectiveness of electroconvulsive therapy (ECT) in pharmacotherapy resistant major depression and schizophrenia has been shown for all age groups. Nevertheless, age specific side effects such as greater cognitive impairment and higher somatic risks due to medical comorbidities and concomitant medication may be limiting factors in geriatric patients.

Methods: We retrospectively evaluated 4457 treatments in 380 patients. Clinical variables, treatment modalities, ictal and postictal neurophysiological parameters were analysed. For modelling the influence of age on these variables of interest, linear regression models, if necessary logistic regression models, were performed (statistical software package R 2.8.1).

Results: We found a considerable clinical improvement over all age groups. Higher severity of disease at admission came up with a better clinical response. In comparison of the whole patient sample versus the elderly over the age of 60, there were no significant differences in need and number of concomitant psychotropic, but in medical co-medication. Ictal and postictal EEG parameters were only in part predictive for clinical outcome, but age had a significant influence on most of them. Cardiovascular side effects and cognitive disturbances were more frequent in the elderly but were only transient, and in most cases there was no need for any specific treatment.

Conclusions: The outcome results show excellent effectiveness and tolerability of ECT in all age groups. The very old are more prone to adverse events, but nonetheless tolerate ECT well and are likely to benefit.