Ma-Thesis Saskia Mooijman

Supervisors: Laura S. Bos (UvA), Djaina Satoer (Erasmus MC), and Josje Verhagen (UvA)

Linguistic processing speed in glioma patients: the relationship between linguistic and nonlinguistic cognitive abilities

Gliomas are the most common type of primary brain tumors. Gliomas are often located in brain regions that are important for cognitive functions, such as language, attention, memory, or executive functions. Because of this, patients often experience cognitive problems. To preserve these crucial functions, the *awake* procedure in tumor surgery is used increasingly often. In this thesis, I aimed to disentangle glioma patient's linguistic processing speed abilities from nonlinguistic cognitive abilities. The sensitivity of frequently used tests was assessed by comparing the results of these tests to the problems patients report during the anamnesis. The effects of awake surgery were investigated by examining abilities at two moments after surgery. I found that there was a subgroup of patients with gliomas in the dominant hemisphere that had difficulties with linguistic processing speed. Furthermore, linguistic processing speed appears to be influenced by more general cognitive abilities, and processing speed may contribute to subjectively experienced problems. The results of the postoperative assessments showed variation between patients but did not reveal severe postoperative deficits.