Supplementary Material

Sample Size Calculation

Cognitive impairment (at least one Z-score in the impaired range ≤-1.5, 7th percentile) was present in 73% of UFS patients. Global Z-scores across cognitive tasks in UFS-r patients demonstrated mild but significantly greater cognitive dysfunction (n=4, mean -0.51, std 0.7) than patients in the UFS-nr group (n=8, mean 0.11, std 0.4) ($t=2.14$, $p<0.05$, $d=0.69$; Mann-Whitney $U=5$, $p<0.05$, $r=0.54$) (Supplementary Figure 1). The required sample size (significance 0.05, 80% power) is 55 participants per group.

Clinically significant symptoms of anxiety and depression (scores above clinical cutoffs on the GAD-7 ad NDDI-E questionnaires) were observed in 50% and 58% of all UFS patients. In the UFS-r group, the scores fell in the clinically significant range in 50% and 75% of patients respectively. In the UFS-nr group, the rates of clinically significant scores were both 50%. To detect differences on the depression scale between the two UFS groups in the proposed study, the required sample sizes (significance 0.05, 80% power) are n=72 for the non-recurrence group and n=48 for the recurrence group.

rsfMRI analyses were performed on all UFS patients with MRI data (n=8) and age-matched controls (n=8) as comparison of UFS-r and UFS-nr was not possible due to missing MRI data. Global efficiency of the DMN differed between groups at $p<0.05$ with an effect size of $d=0.89$. With respect to specific DMN nodes, the left posterior cingulate betweenness centrality differed between groups at $p<0.05$ with an effect size of $d=0.74$. Based on these effect sizes, the required sample size (for significance 0.05, 80% power) were estimated at 15 and 51 participants per group, respectively.

Supplementary Figure 1: Cognitive performance in UFS-r, UFS-nr