**SUPPLEMENTARY MATERIAL**

Supplemental Table 1. Time Schedule of Measurement of Predictor Variables

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Acute Phase Baseline | Acute Phase Termination | Stabilization Phase Week 4 | RCT Baseline(end of Stabilization Phase) |
| Sociodemographic | X |  |  |  |
| Inpatient status at acute phase enrollment | X |  |  |  |
| Study site | X |  |  |  |
| Number of lifetime depressive episodes | X |  |  |  |
| Duration of current episode of depression | X |  |  |  |
| Age of onset of first major depressive episode | X |  |  |  |
| Treatment resistance in current episode | X |  |  |  |
| Suicide attempt in current episode | X |  |  |  |
| Ham-D17 total score | X | X |  |  |
| SADS delusion score | X | X | X | X |
| HADS anxiety score | X |  |  | X |
| CORE total score | X |  |  | X |
| BPRS | X |  |  |  |
| CGI severity | X | X | X | X |
| CIRS-G total score | X |  |  | X |
| Simpson Angus Scale Total score | X | X | X | X |
| Barnes Akathisia Rating Scale global score | X | X | X | X |
| Neuropsychological measuresa |  |  |  | X |
| Dosages of sertraline and olanzapine |  |  |  | X |

Abbreviations: BPRS = Brief Psychiatric Rating Scale; CGI = Clinical Global Impression; CIRS-G = Cumulative Illness Rating Scale for Geriatrics; CORE = the CORE measure of psychomotor disturbance; HADS = Hospital Anxiety and Depression Scale; HAM-D17 =17-item Hamilton Depression Rating Scale; SADS = Schedule for Affective Disorders and Schizophrenia

a Neuropsychological instruments were the Delis-Kaplan Executive Function System, Repeatable Battery for the Assessment of Neuropsychological Status, and Mini Mental State Examination.



Supplemental Figure 1. Variable importance in predicting membership of the worsening depression trajectory subgroup among participants in the randomized phase of STOP-PD II (N=126), *excluding* depression severity score at onset of remission from the random forest model. Predictors are presented from top to bottom in order of importance. (The horizontal axis represents mean decrease in Gini Impurity Index, which is a weighted average of reduction in leaf node impurities).