| **First Author, Year** | **Sample size** | **Diagnosis** | **Treatment options** | **Post-treatment severity measure** | **Type of feature selection approach** | **Type of outcome prediction approach** | **CV** | **Mean PAI** | **Mean diff in post-treatment severity between optimal vs. non-optimal** | **Cohen's d** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Brujniks, 2022 | 200 | depression | weekly vs. twice-weekly CBT or IPT | BDI-II | random forest recursive partitioning (“mobforest”) and subsequent bootstrapped backward elimination (“bootstepAIC”) | linear regression | 5-fold |  | 4.93 | 0.37 |
| Cohen, 2020 | 167 | depression | CBT vs. PDT | HAM-D | (random forest recursive partitioning (“mobforest”) OR Elastic Net Regularized Regression ("glmnet") OR Bayesian Additive Regression Trees ("bartMachine")) AND subsequent bootstrapped backward elimination (“bootstepAIC”) | linear regression | 1000 \* 10-fold |  | 1.6 | 0.21 |
| Deisenhofer, 2018 | 225 | PTSD | Tf-Cbt vs. EMDR | PHQ-9 | Genetic Algorithm ("glmulti") | linear regression | leave-one-out | 2.49 | 3.03 | 0.4 |
| DeRubeis, 2014 | 154 | depression | Paroxetine vs. CBT | HRSD | previous analyses on the same sample | generalized linear regression | leave-one-out | 4.2 | 1.78 | 0.28 |
| Friedl, Berger, 2020 | 123 | depression | CBT vs. CBT-EE | BDI-II | Bayesian Model Averaging | linear regression | leave-one-out |  | 1.35 |  |
| Friedl, Krieger, 2020 | 245 | depression | blended treatment vs. TAU | PHQ-9 | Bayesian Model Averaging | linear regression | leave-one-out |  | 2.33 |  |
| Hoeboer, 2021 | 149 | PTSD | PE & iPE vs. STAIR | CAPS-5, PCL-5 | random forest iterative comparison with random probes ("Boruta") and subsequent bootstrapped backward elimination (“bootstepAIC”) | linear regression | leave-one-out |  | CAPS-5: 4.02,  PCL-5: 4.69 | CAPS-5: 0.55  PCL-5: 0.47 |
| Huibers, 2015 | 134 | depression | CT vs. IPT | BDI-II | domain-wise hierarchical multiple linear regressions | linear regression | leave-one-out | 8.9 | 6 | 0.51 |
| Loohuis, 2022 | 262 | urinary incontinence | App-based treatment vs. care as usual | UISF | initial selection based on previous studies and sufficent variability;stepwise, backward elimination in multiple linear regressions | linear regression | 5-fold | 0.99 | 1.19 |  |
| Lopez-Gomez, 2019 | 128 | depression | Group-based IPPI-D vs. Group-based CBT | BDI-II | random forest recursive partitioning (“mobforest”) and Elastic Net | linear regression | 10-fold | 4.02 | 2.3 | 0.24 |
| Schwartz, 2021 | 1379 | transdiagnostic | CBT vs. Psychodynamic therapy | BSI–GSI | random forest recursive partitioning (“mobforest”) and subsequent bootstrapped backward elimination (“bootstepAIC”) | linear regression | holdout-set | -0.018 | -0.043 |  |
| Senger, 2021 | 203 | somatic symptoms | CBT vs. Encert | SOMS-7 T | random forest recursive partitioning (“mobforest”) and Elastic Net Regularized Regression ("glmnet") | regression | leave-one-out | 5 | 4.11 | 0.278 |
| van Bronswijk, 2021; subanalysis STEPd | STEPd: 151, FreqMesh: 200, both: 351 | depression | CT vs. IPT | BDI-II | random forest recursive partitioning (“mobforest”) and subsequent bootstrapped backward elimination (“bootstepAIC”) | Elastic Net | 5-fold, out-of-sample |  | STEPd: 6.53,  FreqMech: 2.81,  STEPd to FreqMech: 2.1,  FreqMech to STEPd: 3.25 | STEPd: 0.57,  FreqMech: 0.2,  STEPd to FreqMech: 0.16,  FreqMech to STEPd: 0.27 |
| Webb, 2019 | 216 | depression | Sertraline vs. Placebo | HRSD | (random forest recursive partitioning (“mobforest”) OR Elastic Net Regularized Regression ("glmnet") OR Bayesian Additive Regression Trees ("bartMachine")) AND subsequent bootstrapped backward elimination (“bootstepAIC”) | regression | 1000 \* 10-fold | 3.4 | 1.99 | 0.29 |