Predictive Modeling of Treatment Resistant Depression using data from STAR\*D and an Independent Clinical Study

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**Supporting Information:**

[**S5**](#Table_S5) **Table** Model performance using ELNET features selected from the elastic net for the top n (n ~ 30) model

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Outcome measurement | acc | spc | sst | auc |
|  |   | XGBoost |   |   |
| QIDS-SR16/Remission | 0.68 | 0.67 | 0.69 | 0.76 |
| QIDS-C16/Remission | 0.67 | 0.65 | 0.72 | 0.76 |
| QIDS-SR16/Response | 0.65 | 0.63 | 0.72 | 0.76 |
| QIDS-C16/Response | 0.64 | 0.61 | 0.77 | 0.75 |
|  |   | Random forest |   |
| QIDS-SR16/Remission | 0.71 | 0.72 | 0.68 | 0.77 |
| QIDS-C16/Remission | 0.70 | 0.70 | 0.68 | 0.76 |
| QIDS-SR16/Response | 0.67 | 0.67 | 0.67 | 0.75 |
| QIDS-C16/Response | 0.69 | 0.68 | 0.72 | 0.76 |
|  |   | $l\_{2}$ penalized logistic regression |
| QIDS-SR16/Remission | 0.72 | 0.76 | 0.61 | 0.78 |
| QIDS-C16/Remission | 0.72 | 0.73 | 0.68 | 0.77 |
| QIDS-SR16/Response | 0.71 | 0.73 | 0.66 | 0.74 |
| QIDS-C16/Response | 0.69 | 0.69 | 0.70 | 0.77 |
|  |   | GBDT |   |   |
| QIDS-SR16/Remission | 0.73 | 0.74 | 0.69 | 0.78 |
| QIDS-C16/Remission | 0.70 | 0.71 | 0.68 | 0.76 |
| QIDS-SR16/Response | 0.68 | 0.68 | 0.67 | 0.76 |
| QIDS-C16/Response | 0.68 | 0.67 | 0.72 | 0.77 |
|  |   | Elastic Net |   |   |
| QIDS-SR16/Remission | 0.71 | 0.74 | 0.64 | 0.76 |
| QIDS-C16/Remission | 0.70 | 0.73 | 0.64 | 0.76 |
| QIDS-SR16/Response | 0.70 | 0.73 | 0.60 | 0.74 |
| QIDS-C16/Response | 0.70 | 0.71 | 0.66 | 0.74 |