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| **Appendix 4.** Area under the receiver operating characteristic (AUROC) statistics with 95% confidence intervals for SF-36 PCS and SF-36 MCS for each algorithm and model | | | | | |
| PROM | Algorithm | Model | AUROC | 95% CI upper | 95% CI lower |
| SF-36 PCS | Dummy | Before decision | 0.50 | 0.48 | 0.52 |
| SF-36 PCS | Logistic LASSO | Before decision | 0.69 | 0.66 | 0.71 |
| SF-36 PCS | Support vector machine | Before decision | 0.69 | 0.66 | 0.71 |
| SF-36 PCS | Random forest | Before decision | 0.69 | 0.67 | 0.72 |
| SF-36 PCS | Dummy | Before surgery | 0.50 | 0.48 | 0.52 |
| SF-36 PCS | Logistic LASSO | Before surgery | 0.78 | 0.75 | 0.80 |
| SF-36 PCS | Support vector machine | Before surgery | 0.77 | 0.75 | 0.79 |
| SF-36 PCS | Random forest | Before surgery | 0.78 | 0.75 | 0.80 |
| SF-36 PCS | Dummy | Before discharge | 0.50 | 0.48 | 0.52 |
| SF-36 PCS | Logistic LASSO | Before discharge | 0.78 | 0.76 | 0.80 |
| SF-36 PCS | Support vector machine | Before discharge | 0.77 | 0.75 | 0.79 |
| SF-36 PCS | Random forest | Before discharge | 0.78 | 0.76 | 0.80 |
| SF-36 PCS | Dummy | After discharge | 0.50 | 0.48 | 0.52 |
| SF-36 PCS | Logistic LASSO | After discharge | 0.78 | 0.76 | 0.80 |
| SF-36 PCS | Support vector machine | After discharge | 0.78 | 0.75 | 0.80 |
| SF-36 PCS | Random forest | After discharge | 0.78 | 0.76 | 0.81 |
| SF-36 PCS | Dummy | Abbreviated 1 | 0.50 | 0.48 | 0.52 |
| SF-36 PCS | Logistic LASSO | Abbreviated 1 | 0.65 | 0.62 | 0.68 |
| SF-36 PCS | Support vector machine | Abbreviated 1 | 0.63 | 0.60 | 0.66 |
| SF-36 PCS | Random forest | Abbreviated 1 | 0.65 | 0.63 | 0.68 |
| SF-36 PCS | Dummy | Abbreviated 2 | 0.50 | 0.48 | 0.52 |
| SF-36 PCS | Logistic LASSO | Abbreviated 2 | 0.71 | 0.68 | 0.73 |
| SF-36 PCS | Support vector machine | Abbreviated 2 | 0.69 | 0.66 | 0.71 |
| SF-36 PCS | Random forest | Abbreviated 2 | 0.72 | 0.69 | 0.74 |
| SF-36 MCS | Dummy | Before decision | 0.50 | 0.48 | 0.52 |
| SF-36 MCS | Logistic LASSO | Before decision | 0.63 | 0.61 | 0.65 |
| SF-36 MCS | Support vector machine | Before decision | 0.63 | 0.61 | 0.65 |
| SF-36 MCS | Random forest | Before decision | 0.61 | 0.59 | 0.63 |
| SF-36 MCS | Dummy | Before surgery | 0.50 | 0.48 | 0.52 |
| SF-36 MCS | Logistic LASSO | Before surgery | 0.89 | 0.87 | 0.90 |
| SF-36 MCS | Support vector machine | Before surgery | 0.88 | 0.87 | 0.90 |
| SF-36 MCS | Random forest | Before surgery | 0.89 | 0.88 | 0.90 |
| SF-36 MCS | Dummy | Before discharge | 0.50 | 0.48 | 0.52 |
| SF-36 MCS | Logistic LASSO | Before discharge | 0.89 | 0.87 | 0.90 |
| SF-36 MCS | Support vector machine | Before discharge | 0.88 | 0.87 | 0.90 |
| SF-36 MCS | Random forest | Before discharge | 0.89 | 0.88 | 0.90 |
| SF-36 MCS | Dummy | After discharge | 0.50 | 0.48 | 0.52 |
| SF-36 MCS | Logistic LASSO | After discharge | 0.88 | 0.87 | 0.90 |
| SF-36 MCS | Support vector machine | After discharge | 0.88 | 0.87 | 0.90 |
| SF-36 MCS | Random forest | After discharge | 0.89 | 0.88 | 0.90 |
| SF-36 MCS | Dummy | Abbreviated 1 | 0.50 | 0.48 | 0.52 |
| SF-36 MCS | Logistic LASSO | Abbreviated 1 | 0.88 | 0.87 | 0.89 |
| SF-36 MCS | Support vector machine | Abbreviated 1 | 0.88 | 0.87 | 0.89 |
| SF-36 MCS | Random forest | Abbreviated 1 | 0.88 | 0.87 | 0.89 |
| SF-36 MCS | Dummy | Abbreviated 2 | 0.50 | 0.48 | 0.52 |
| SF-36 MCS | Logistic LASSO | Abbreviated 2 | 0.88 | 0.87 | 0.89 |
| SF-36 MCS | Support vector machine | Abbreviated 2 | 0.88 | 0.87 | 0.89 |
| SF-36 MCS | Random forest | Abbreviated 2 | 0.88 | 0.87 | 0.90 |

PCS = physical component score; MCS = mental component score; LASSO = least absolute shrinkage and selection operator.