**Supplemental Material**

**eTable 1.** Mean comparisons of demographic and risk calculator variables between converters and non-converters for long and short symptom duration groups in the combined NAPLS2/NAPLS3 sample

**eTable 2.**  Mean comparisons of demographic and risk calculator variables for long and short symptom duration groups in the NAPLS3 imaging sample

**eTable 3.** Mean comparisons of demographic and risk calculator variables between converters and non-converters for long and short symptom duration groups in the NAPLS3 imaging sample

**eTable 4.** Summary scores of SOPS symptom domains across sites

**eTable 5.** Calibration metrics for all prediction models

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Long Duration Group | | | |  |  | Short Duration Group | | | |
|  |  | Converters |  | Non-Converters | Test Statistic | *p*-value |  | Converters |  | Non-Converters | Test Statistic | *p*-value |
|  | N | Mean (SD) | N | Mean (SD) | *t/χ2* (df) |  | N | Mean (SD) | N | Mean (SD) | *t/χ2* (df) |  |
| *Demographics* |  |  |  |  |  |  |  |  |  |  |  |  |
| Age | 58 | 18.95 (4.1) | 531 | 18.48 (4.3) | *t*(70.9) = 0.82 | 0.41 | 81 | 18.11 (3.7) | 512 | 18.04 (4.1) | *t*(113.8) = 0.15 | 0.88 |
| Sex, No. (%) female | 58 | 25 (43.1%) | 531 | 240 (45.2%) | *χ2*(1) = 0.09 | 0.76 | 81 | 34 (42%) | 512 | 223 (43.6%) | *χ2*(1) = 0.07 | 0.79 |
| Race, No. (%) non-white | 58 | 34 (59%) | 530 | 219 (41.3%) | *χ2*(1) = 6.39 | **0.01\*** | 81 | 36 (44.4%) | 512 | 230 (44.9%) | *χ2*(1) = 0.01 | 0.94 |
| Ethnicity, No. (%) Hispanic | 58 | 8 (13.8%) | 531 | 104 (19.6%) | *χ2*(1) = 1.14 | 0.29 | 81 | 14 (17.3%) | 512 | 111 (21.7%) | *χ2*(1) = 0.82 | 0.37 |
| Years of education | 58 | 11.59 (2.7) | 531 | 11.49 (3.05) | *t*(73.9) = 0.25 | 0.80 | 80 | 11.16 (2.8) | 511 | 11.18 (2.9) | *t*(108.5) = -0.04 | 0.97 |
| *Other predictor variables* |  |  |  |  |  |  |  |  |  |  |  |  |
| P1P2 | 58 | 3.47 (1.7) | 531 | 2.75 (1.4) | *t*(66.45) = 3.15 | **0.002\*** | 81 | 3.75 (1.6) | 512 | 2.89 (1.5) | *t*(101.8) = 4.57 | **<0.001\*** |
| BACS raw score | 58 | 50.6 (14.5) | 531 | 55.99 (13.3) | *t*(67.9) = -2.71 | **0.008\*** | 81 | 51.81 (13.4) | 512 | 55.83 (12.8) | *t*(104.6) = -2.53 | **0.01\*** |
| HVLT total | 58 | 24.4 (5.9) | 531 | 26.05 (5.1) | *t*(66.7) = -2.04 | **0.045\*** | 81 | 24.38 (5.6) | 512 | 26.23 (5.0) | *t*(101.0) = -2.77 | **0.007\*** |
| Family history, No. (%) yes | 58 | 11 (19%) | 531 | 55 (10.4%) | *χ2*(1) = 3.90 | **0.048\*** | 81 | 16 (19.8%) | 512 | 58 (11.3%) | *χ2*(1) = 4.55 | **0.03\*** |
| GFS decline | 58 | 0.95 (1.2) | 531 | 0.57 (0.9) | *t*(64.8) = 2.34 | **0.02\*** | 81 | 0.74 (0.9) | 512 | 0.70 (0.9) | *t*(108.6) = 0.42 | 0.67 |

**eTable 1.** Mean comparisons of demographic and risk calculator variables between converters and non-converters for long and short symptom duration groups in the combined NAPLS2/NAPLS3 sample

\*Asterisk indicates that mean differences between groups are significant at the *p* < 0.05 level.

**eTable 2.**  Mean comparisons of demographic and risk calculator variables for long and short symptom duration groups in the NAPLS3 imaging sample

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Long Symptom Duration | | Short Symptom Duration | | Test Statistic | *p*-value |
|  | n | Mean (SD) | n | Mean (SD) | *t/χ2* (df) |  |
| *Demographics* |  |  |  |  |  |  |
| Age | 136 | 18.7 (4.1) | 126 | 18.8 (4.1) | *t*(259.0) = -0.25 | 0.80 |
| Sex, No. (%) female | 143 | 63 (44%) | 131 | 60 (46%) | *χ2*(1) = 0.08 | 0.77 |
| Race, No. (%) non-white | 142 | 63 (44.4%) | 131 | 59 (55%) | *χ2*(1) = 6.12 | **0.01\*** |
| Ethnicity, No. (%) Hispanic | 143 | 31 (21.7%) | 131 | 29 (22.1%) | *χ2*(1) = 0.01 | 0.93 |
| Years of education | 143 | 12.1 (3.3) | 130 | 12.0 (2.9) | *t*(270.1) = 0.18 | 0.86 |
| Baseline antipsychotics, No. (%) prescribed | 135 | 31 (23%) | 128 | 28 (22%) | *χ2*(1) < 0.001 | 0.95 |
| *Other predictor variables* |  |  |  |  |  |  |
| SOPS items P1+P21 | 136 | 3.27 (1.2) | 126 | 3.30 (1.2) | *t*(256.4) = -0.20 | 0.85 |
| BACS raw score | 136 | 53.6 (13.5) | 126 | 57.2 (14.0) | *t*(256.4) = -2.11 | **0.04\*** |
| HVLT-R total | 136 | 25.6 (5.9) | 126 | 26.5 (4.5) | *t*(250.9) = -1.37 | 0.17 |
| Family history, No. (%) yes | 136 | 14 (10.3%) | 126 | 21 (16.7%) | *χ2*(1) = 2.29 | 0.13 |
| Decline in social functioning | 136 | 0.47 (0.8) | 126 | 0.70 (0.9) | *t*(246.9) = -2.22 | **0.03\*** |
| Baseline cortical thickness | 143 | 2.94 (0.16) | 131 | 2.93 (0.17) | *t*(266.7) = 0.74 | 0.46 |
| Percent change in cortical thickness | 143 | -0.001 (0.01) | 131 | -0.002 (0.01) | *t*(256.5) = 0.56 | 0.58 |

\*Asterisk indicates that mean differences between groups are significant at the *p* < 0.05 level

**eTable 3.** Mean comparisons of demographic and risk calculator variables between converters and non-converters for long and short symptom duration groups in the NAPLS3 imaging sample

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Long Duration Group | | | |  |  | Short Duration Group | | | |
|  |  | Converters |  | Non-Converters | Test Statistic | *p*-value |  | Converters |  | Non-Converters | Test Statistic | *p*-value |
|  | N | Mean (SD) | N | Mean (SD) | *t/χ2* (df) |  | N | Mean (SD) | N | Mean (SD) | *t/χ2* (df) |  |
| *Demographics* |  |  |  |  |  |  |  |  |  |  |  |  |
| Age | 18 | 19.2 (4.6) | 118 | 18.6 (4.1) | *t*(21.2) = 0.45 | 0.65 | 17 | 19.6 (4.9) | 109 | 18.7 (3.9) | *t*(19.4) = 0.70 | 0.49 |
| Sex, No. (%) female | 18 | 6 (33%) | 118 | 55 (46.6%) | *χ2*(1) = 1.11 | 0.29 | 17 | 8 (47.1%) | 109 | 50 (46%) | *χ2*(1) = 0.008 | 0.93 |
| Race, No. (%) non-white | 18 | 9 (50%) | 117 | 52 (44.4%) | *χ2*(1) = 0.19 | 0.66 | 17 | 8 (47.1%) | 109 | 61 (56%) | *χ2*(1) = 0.47 | 0.49 |
| Ethnicity, No. (%) Hispanic | 18 | 1 (5.6%) | 118 | 30 (25.4%) | *χ2*(1) = 3.5 | 0.06 | 17 | 1 (5.9%) | 109 | 27 (24.8%) | *χ2*(1) = 3.04 | 0.08 |
| Years of education | 18 | 11.8 (3.2) | 118 | 12.2 (3.4) | *t*(23.1) = -0.47 | 0.64 | 17 | 12.4 (3.4) | 109 | 12.0 (2.9) | *t*(18.3) = 0.45 | 0.66 |
| *Other predictor variables* |  |  |  |  |  |  |  |  |  |  |  |  |
| P1P2 | 18 | 4.2 (1.5) | 118 | 3.1 (1.1) | *t*(19.9) = 2.86 | **0.009\*** | 17 | 4.0 (0.9) | 109 | 3.2 (1.3) | *t*(26.0) = 3.14 | **0.004\*** |
| BACS raw score | 18 | 50.2 (19.0) | 118 | 54.2 (12.4) | *t*(19.2) = -0.87 | 0.40 | 17 | 54.8 (17.6) | 109 | 57.6 (13.4) | *t*(19.0) = -0.64 | 0.53 |
| HVLT total | 18 | 25.1 (6.3) | 118 | 25.7 (5.6) | *t*(21.8) = -0.37 | 0.71 | 17 | 25.2 (5.0) | 109 | 26.7 (4.4) | *t*(20.1) = -1.14 | 0.27 |
| Family history, No. (%) yes | 18 | 1 (5.6%) | 118 | 13 (11%) | *χ2*(1) = 0.50 | 0.48 | 17 | 5 (29.4%) | 109 | 16 (14.7%) | *χ2*(1) = 2.3 | 0.13 |
| GFS decline | 18 | 0.78 (1.1) | 118 | 0.42 (0.7) | *t*(19.3) = 1.37 | 0.19 | 17 | 0.35 (0.6) | 109 | 0.75 (0.9) | *t*(28.8) = -2.33 | **0.03\*** |
| Baseline cortical thickness | 18 | 2.96 (0.14) | 118 | 2.94 (0.16) | *t*(24.6) = 0.49 | 0.63 | 17 | 2.95 (0.20) | 109 | 2.92 (0.16) | *t*(19.4) = 0.46 | 0.65 |
| Percent change in cortical thickness | 18 | -0.006 (0.007) | 118 | -0.0008 (0.007) | *t*(22.3) = -2.85 | **0.009\*** | 17 | -0.008 (0.008) | 109 | -0.0008 (0.008) | *t*(20.7) = -3.28 | **0.003\*** |

\*Asterisk indicates that mean differences between groups are significant at the *p* < 0.05 level.

**eTable 4.** Summary scores of SOPS symptom domains across sites

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Site | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Test statistic (df) | *p*-value\* |
| Total Pos. Mean (SD) | 13.3 (4.0) | 13.7 (3.6) | 12.6 (3.5) | 12.0 (3.5) | 12.3 (3.1) | 12.1 (4.3) | 11.3 (3.9) | 13.3 (2.9) | 11.2 (3.2) | *F*(8,886) = 8.57 | <0.001 |
| Total Neg. Mean (SD) | 12.3 (6.7) | 13.4 (5.8) | 12.7 (6.2) | 14.0 (5.6) | 10.7 (5.4) | 12.8 (6.5) | 9.5 (5.9) | 13.1 (5.2) | 10.6 (6.9) | *F*(8,2884) = 10.08 | <0.001 |
| Total Disorg. Mean (SD) | 5.5 (3.7) | 6.3 (3.3) | 5.6 (3.0) | 5.1 (3.3) | 4.9 (2.8) | 4.9 (3.1) | 4.3 (3.2) | 5.6 (2.4) | 5.0 (2.9) | *F*(8,460) = 5.91 | <0.001 |
| Total Gen. Mean (SD) | 8.4 (3.7) | 9.6 (4.0) | 8.1 (3.8) | 10.5 (4.5) | 8.9 (3.6) | 8.6 (4.2) | 8.6 (4.6) | 12.1 (3.7) | 7.9 (4.0) | *F*(8,1861) = 14.03 | <0.001 |

\*Post-hoc pairwise comparisons demonstrate some between-site differences in summary scores in line with expected variation across sites.

**eTable 5.** Calibration metrics for all prediction models

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Brier  score | Calibration  slope |
|  | *Risk calculator model* | | |
|  | Full sample (validation set n = 650) | 0.98 | 1.29 |
| Short symptom duration (validation set n = 306) | 1.09 | 0.92 |
| Long symptom duration (validation set n = 305) | 1.07 | 1.58 |
|  | *With imaging variables (sample n = 274)* | | |
| Full sample | Risk score only | 1.10 | 0.83 |
| Risk score + baseline cortical thickness | 1.10 | 0.83 |
| Risk score + percent difference in cortical thickness | 1.09 | 0.92 |
| Short duration | Risk score only | 1.08 | 1.02 |
| Risk score + baseline cortical thickness | 1.08 | 1.02 |
| Risk score + percent difference in cortical thickness | 1.07 | 1.14 |
| Long duration | Risk score only | 1.11 | 0.99 |
| Risk score + baseline cortical thickness | 1.11 | 1.04 |
| Risk score + percent difference in cortical thickness | 1.10 | 0.98 |