# Supplementary Material for A Personalized Predictive Model that Jointly Optimizes Discrimination and Calibration

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## 1 Table S1

| $\alpha$ | Proportion | AUROC | CITL | Slope | ICI |
|---|---|---|---|---|---|
| 0.475 | 0.0694 | **0.9194** (0.011)<br>(0.8945, 0.9264) | **0.0273** (0.015)<br>(0.0046, 0.0694) | **0.8519** (0.141)<br>(0.7437, 1.058) | **0.0276** (0.011)<br>(0.0104, 0.0526) |
| 0.49 | 0.0694 | **0.9194** (0.011)<br>(0.8945, 0.9264) | **0.0273** (0.015)<br>(0.0046, 0.0694) | **0.8519** (0.141)<br>(0.7437, 1.058) | **0.0276** (0.011)<br>(0.0104, 0.0526) |
| 0.5 | 0.0781 | **0.9226** (0.010)<br>(0.8993, 0.9290) | **0.0315** (0.015)<br>(0.0084, 0.0702) | **0.9473** (0.131)<br>(0.8291, 1.1786) | **0.0291** (0.012)<br>(0.0120, 0.0629) |
| 0.58 | 0.1172 | **0.9359** (0.009)<br>(0.9064, 0.9472) | **0.0349** (0.016)<br>(0.0110,0.0752) | **1.226** (0.131)<br>(1.0472, 1.6587) | **0.0331** (0.012)<br>(0.0151, 0.0671) |
| 0.6 | 0.1215 | **0.9381** (0.009)<br>(0.9073, 0.9501) | **0.0357** (0.017)<br>(0.0106, 0.0772) | **1.254** (0.134)<br>(1.089, 1.676) | **0.0347** (0.0121)<br>(0.0169, 0.0677) |
| 0.62 | 0.1259 | **0.9382** (0.009)<br>(0.9074, 0.9501) | **0.0379** (0.016)<br>(0.0144, 0.0796) | **1.278** (0.134)<br>(1.1013, 1.7151) | **0.0377** (0.012)<br>(0.0217, 0.0729) |
| 0.750 | 0.1563 | **0.9438** (0.009)<br>(0.9185, 0.9580) | **0.0426** (0.017)<br>(0.0213, 0.0828) | **1.4325** (0.146)<br>(1.2643, 1.9152) | **0.0461** (0.012)<br>(0.0306, 0.0791) |
| 0.85 | 0.6424 | **0.9223** (0.011)<br>(0.9098, 0.9482) | **0.0474** (0.015)<br>(0.0332, 0.0748) | **1.5337** (0.131)<br>(1.4832, 1.7624) | **0.0581** (0.012)<br>(0.0490, 0.0814) |
| 0.9 | 0.8594 | **0.8688** (0.015)<br>(0.8461, 0.9035) | **0.0196** (0.010)<br>(0.0058, 0.0588) | **1.141** (0.097)<br>(1.099, 1.326) | **0.0240** (0.009)<br>(0.0096, 0.0441) |
| 0.99 | 0.9983 | **0.8614** (0.015)<br>(0.8399, 0.8940) | **0.0189** (0.10)<br>(0.0036, 0.0521) | **1.098** (0.097)<br>(1.076, 1.281) | **0.0229** (0.009)<br>(0.0085, 0.0409) |

Table 1: Proportion is optimal proportion, $M$, found in training step of algorithm. Point estimates are given for each of the performance measures. First set of parentheses contain the bootstrap standard error for the estimates. Second set of parentheses contain the BCa confidence interval.