

Table 1. Illustration of the calculation of the proposed metrics to assess models predicting treatment effect based on matching patients. The calibration metrics are calculated in the following manner calibration-in-the-large = mean(M)-mean(L) \approx -0.267, E_{avg} -for-benefit = mean(abs(L-N)) \approx 0.579, E_{50} -for-benefit = median(abs(L-N)) \approx 0.624, and E_{90} -for-benefit = quantile(abs(L-N), 0.9) \approx 0.904. The overall performance are calculated by Cross-entropy-for-benefit = $-\frac{1}{n_p} [I(M = 1) \cdot \log[(1 - K)J] + I(M = 0) \log[(1 - K)(1 - J) + K \cdot J] + I(M = -1) \log[K(1 - J)]] \approx 1.165$ and Brier-for-benefit = $\frac{1}{2n_p} [[(1 - K)J - I(M = 1)]^2 + [(1 - K)(1 - J) + K \cdot J - I(M = 0)]^2 + [K(1 - J) - I(M = -1)]^2] \approx 0.343$. Abbreviations: $p_0 = P(Y=1 | W=0)$; $p_1 = P(Y=1 | W=1)$; LOESS curve is created by predict(loess(M ~ L)), which results in the same values as the observed pairwise treatment effect (M), when rounded to three decimals, due to a small number of observations.

Matched patient pair (A)	Patient assigned to treatment				Patient assigned to control treatment				Matched pair				
	p_0 (B)	p_1 (C)	Predicted treatment effect (D=B-C)	Observed outcome (E)	p_0 (F)	p_1 (G)	Predicted treatment effect (H=F-G)	Observed outcome (I)	p_0 (J=F)	p_1 (K=C)	Predicted pairwise treatment effect (L=J-K)	Observed pairwise treatment effect (M=I-E)	LOESS curve (N)
1	0.136	0.283	-0.147	1	0.162	0.307	-0.145	1	0.162	0.283	-0.121	0	0.412
2	0.246	0.343	-0.097	0	0.218	0.319	-0.101	1	0.218	0.343	-0.125	1	0.589
3	0.156	0.219	-0.063	1	0.142	0.203	-0.061	0	0.142	0.219	-0.077	-1	-0.901
4	0.081	0.083	0.002	0	0.098	0.062	0.036	0	0.098	0.083	0.015	0	0.081
5	0.345	0.212	0.133	1	0.299	0.171	0.128	0	0.299	0.212	0.087	-1	-0.937
6	0.421	0.390	0.031	1	0.561	0.255	0.306	1	0.561	0.390	0.171	0	-0.190
7	0.364	0.201	0.163	1	0.243	0.164	0.079	0	0.243	0.201	0.042	0	-0.217
8	0.264	0.199	0.065	1	0.345	0.278	0.067	0	0.345	0.199	0.146	-1	-0.707